MANUAL DE INSTRUCCIONES

MANUAL DE MANTENIMIENTO

MANUAL ORIGINAL

GRÚA DE BIPEDESTACIÓN GIRATORIA DE ACCIONAMIENTO MANUAL PARA LA TRANSFERENCIA DE DISCAPACITADOS Y ENFERMOS, USO EN INTERIOR.

MARCA *SOLMATS®*

MODELO *GBR 11*

VERSIÓN A01

NOTA: ESTA VERSIÓN ANULA LAS DE FECHA ANTERIOR

Febrero de 2012

Grúa de bipedestación giratoria de accionamiento manual para la transferencia de discapacitados y enfermos, uso en interior.

Marca SOLMATS®

Modelo GBR 11

Para poder garantizar la **calidad del producto final** este equipo deberá funcionar con los productos, consumibles y recambios originales servidos por el Fabricante o distribuidor autorizado.

NOTA IMPORTANTE: Para cualquier consulta o solicitud de recambio deberán conocerse los siguientes datos:

- MODELO del equipo.
- N° DE FABRICACIÓN: *(Grabado en la placa situada en el equipo).*
- NÚMERO de la pieza a suministrar.
- CANTIDAD de piezas.

MARCA:	SOLMATS®
MODELO:	GBR 11
CLASE (según R.D. 414/96):	CLASE I
N° DE FABRICACION:	A01
MASA TOTAL:	125 Kg aprox.
FECHA DE FABRICACION:	03/2012

Para cualquier consulta o pedido de recambios originales dirigirse a:

Comercial y recambios: CREA & AJUDA S.L.
Dirección: C/ Vilalta, n° 3
25.748 CABANABONA (LLEIDA)
Teléfono Int.: 34-973 460 049.
Fax Int.: 34-973 460 049.

También podrán dirigirse a cualquier Distribuidor Autorizado.

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1.- NORMAS DE SEGURIDAD

¡ATENCIÓN!

NO UTILIZAR EL EQUIPO SIN ANTES HABER LEÍDO LAS SIGUIENTES RECOMENDACIONES Y NORMAS DE SEGURIDAD.

1. La grúa de bipedestación SIEMPRE será trasladada por **personal especializado** y FORMADO ESPECÍFICAMENTE en el manejo de la misma (celadores/as, enfermeros/as, personal sanitario, etc.) y manejada después de haber leído el presente MANUAL DE INSTRUCCIONES, y nunca por el propio USUARIO. La grúa de bipedestación giratoria descrita está diseñada para ayudar a ponerse de pie a personas mediante un arnés, NUNCA para levantar a los usuarios sin apoyarse por sí mismos en la grúa o en el suelo.

2. COMPROBAR que la máquina dispone de los dispositivos de seguridad en condiciones correctas: *frenos de las ruedas, bloqueos de las guías, sirga de acero, bloqueo de la guía inferior, etc.*

   NOTA: Sin estos dispositivos de seguridad está PROHIBIDA su utilización no haciéndose responsable el Fabricante de cualquier accidente derivado de ello.

3. COMPROBAR el estado general de la grúa de bipedestación giratoria y en especial, los bloqueos, guías y ruedas.

4. Los frenos de la grúa no están diseñados para frenarla en marcha sino para asegurar que no se mueve cuando está parada. SIEMPRE deberá accionarlos cuando se encuentre la grúa en una zona con pendiente o que pueda moverse.

5. La grúa debe ser supervisada cuidadosamente si el paciente es un niño.

6. La grúa de bipedestación giratoria está diseñada para ser utilizada en el interior (hospitales, residencias, etc.) y en suelos o rampas planas. Por favor considere

que maniobrar la grúa en alfombras o superficies con textura es más difícil, así como lo opuesto si las superficies son planas o de madera; esto se debe a que la fuerza requerida para comenzar el movimiento puede crear fricciones adicionales en las ruedas.

7. Siempre escoja el diseño y la talla del arnés de acuerdo al peso, tamaño y habilidades físicas del usuario. Siempre asegúrese que el arnés es aplicado correctamente. Nunca deje al usuario en el arnés sin atención. Por favor, asegúrese que la grúa no esté húmeda, ya que podría presentar algún daño.

8. COMPROBAR que la **masa máxima** para la transferencia (Usuario + Cargas adicionales: paquetes, etc.) NUNCA supera los **125 Kg.**

9. COMPROBAR que si la grúa de ruedas ha estado expuesta durante un largo período de tiempo al sol, las partes en contacto con el usuario no presentan riesgo de quemadura.

10. CREA&AJUDA S.L. se reserva el derecho de introducir modificaciones debidas a innovaciones técnicas.

11. CREA&AJUDA S.L. declina cualquier responsabilidad que se derive de la inadecuada utilización de las informaciones de este manual (realizar una transferencia sin extender las guías, manipular los bloqueos, etc.) y de cualquier error, omisión de datos o uso indebido del equipo.

12. En caso de aparcamiento y/o de espera SIEMPRE deberán anclarse los dos frenos de estacionamiento situados en las ruedas delanteras para evitar posibles movimientos imprevistos de la máquina.

13. Las denominaciones siguientes se utilizarán como indicativo de seguridad y peligro, significando lo indicado en la Tabla:

ADVERTENCIA:	Este símbolo debe respetarse estrictamente e indica riesgo de accidentes corporales serios o mortales en caso de incumplimiento total o insuficiente de la normas de trabajo y de manipulación.
¡ATENCION!	Este símbolo debe respetarse estrictamente e indica daños materiales serios en caso de incumplimiento total o insuficiente de la normas de trabajo y de manipulación.
RECOMENDACIÓN:	La observación de estas normas de trabajo y de manipulación simplifica el trabajo y lo hacen más eficaz.

SEGURIDAD PERSONAL:

Aunque se han colocado diversos resguardos fijos en partes de la grúa de bipedestación giratoria, existen *riesgos residuales* que no han podido ser protegidos físicamente por la propia naturaleza de ésta.

Estos riesgos son principalmente los de ***atrapamiento*** indicados por los pictogramas que deberán tenerse en consideración y que se circunscriben a la zona peligrosa de *subida/bajada* del cilindro, la zona de giro de la plataforma y de las guías extensibles.

La grúa indicada deberá ser empleada únicamente cuando se encuentre en perfecto estado técnico y para las funciones a las cuales está destinada, observando siempre las normas de seguridad, servicio, mantenimiento y de reparación emitidas por el fabricante, para las cuales es necesario el adiestramiento del personal.

Se prohibirá a toda persona ajena u operador NO autorizado el uso de la grúa, indicándose mediante las correspondientes señales de advertencia.

CREA & AJUDA S.L. se reserva el derecho de actualizar el Manual de Instrucciones en función del avance de la técnica y de las posteriores modificaciones que se realicen sobre la grúa de bipedestación giratoria.

Estará PROHIBIDO:

- Anular los sistemas de seguridad.
- No respetar los avisos de peligro (pictogramas, etc.).
- Utilizar la grúa con usuarios descalzos.

Asimismo se DEBERÁ:

- Facilitar por la Propiedad al Operador Autorizado la FORMACIÓN necesaria, y en especial, el Manual de Instrucciones facilitado por el Fabricante.
- Comprobar periódicamente el estado de los elementos de seguridad, y en especial, los *frenos* y *bloqueos.*

CREA & AJUDA S.L. no se responsabiliza de cualquier accidente ocasionado a personas, a la grúa de bipedestación giratoria o a equipos en tránsito, por un mal uso de ésta o por su uso por personal no cualificado.

2. - INTRODUCCIÓN

Este *Manual de Instrucciones* ha estado realizado teniendo en cuenta todas las informaciones necesarias para la utilización de la grúa de bipedestación giratoria de una manera correcta y segura, incluyendo su mantenimiento.

Se debe conservar este manual, después de su completa lectura y durante toda la vida útil del equipo de modo que esté siempre al alcance del operador autorizado para cualquier aclaración o posible duda.

En caso de tener problemas en la comprensión de este manual o de cualquier cosa relacionada con la máquina, deberá consultar con nuestro Departamento Técnico.

NOTA IMPORTANTE: Cualquier modificación realizada en la grúa de bipedestación giratoria y no autorizada expresamente por CREA & AJUDA S.L. provocará la pérdida de validez de la Declaración CE de Conformidad y por consiguiente la responsabilidad del Fabricante.

3.- INFORMACIÓN GENERAL

3.1.- Descripción de la grúa de bipedestación giratoria y características generales.

El equipo descrito consiste en una grúa de bipedestación giratoria para realizar con facilidad la transferencia de un usuario estando sentado en una silla de ruedas a un inodoro, a una butaca o viceversa.

La grúa de bipedestación giratoria descrita tiene un diseño que permite al personal autorizado la transferencia de un usuario impedido desde la silla de ruedas al inodoro y viceversa.

La grúa de bipedestación giratoria comprende una base con guías extensibles para aumentar la estabilidad a la hora de realizar el giro. Además de una plataforma para apoyar y soportar a la persona de pie. Un apoyo para las piernas, un asidero para el usuario y uno para el operador, ruedas delanteras giratorias direccionalmente con freno y traseras giratorias.

Tal como se indica en la Documentación Gráfica, la grúa de bipedestación giratoria dispone de una base rodante, que monta las ruedas traseras y las ruedas delanteras; en esta base va montado el conjunto de guías extensibles la plataforma y en esta última se montan los mástiles.

Asimismo la grúa de bipedestación giratoria dispone de unos medios de elevación del mástil superior, ayudando al usuario con los soportes para apoyar las piernas y conseguir al usuario una mayor confortabilidad a la hora de incorporarlo y ponerlo en pie.

La posibilidad de la grúa de incorporar y girar al usuario, permite transferirlo de una silla de ruedas al inodoro, colocando la silla perpendicular al inodoro. La grúa realizará la transferencia sin tener que levantar al usuario o cargarlo en peso.

3.2.- Otros datos de interés.

DATOS GENERALES:	
Masa de la grúa:	58 Kg
Masa máxima a transportar (Usuario + carga):	125 Kg
DATOS DEL CIRCUITO ELECTRICO: DEWERT®	
Voltaje:	24 V
Tipo de corriente:	C.C.
Amperaje a plena carga:	5 A en C.C.
DATOS DE LAS RUEDAS: TENTE®	
Tipo rueda delantera:	2975PJOG5GP3G
Capacidad de carga unitaria:	7G kg
Tipo rueda trasera:	143GPOIG38P6G
Capacidad de carga unitaria:	25 kg
Tipo de freno:	Freno de rueda
OTROS:	
Tipo de apoyo piernas :	Poliuretano Inyectado

3.3.- Indicaciones para el transporte y la manutención.

Se transportará cada equipo atendiendo a las indicaciones de seguridad señaladas, así como con cintas o cadenas homologadas colocadas de forma que no se puedan resbalar ni provocar accidentes y en los puntos indicados por el Fabricante.

Durante las operaciones de *carga/descarga* y de manutención se tendrá especial cuidado en no dañar las partes exteriores más sensibles.

3.4.- Indicaciones en la recepción el equipo.

Cuando se produzca la recepción de la grúa de bipedestación giratoria se tendrán en cuenta las siguientes consideraciones:

- Comprobar que no haya sufrido daños durante el transporte y/o que no le falten piezas. Sólo se admitirán reclamaciones si se realizan inmediatamente después de la recepción del equipo y siempre confirmadas por el *transportista* o la *Agencia de transportes.*

- Comprobar que lleve todos los elementos de seguridad en su sitio: *Frenos, bloqueos, pictogramas, etc.* En caso contrario se debe comunicar inmediatamente al FABRICANTE y en ningún caso utilizar el equipo en estas condiciones.

- Los equipos deberán almacenarse en un lugar resguardado.

4.- DESCRIPCIÓN DEL FUNCIONAMIENTO

4.1.- Descripción general

La grúa de bipedestación giratoria consta de una base que realiza la función de bancada, donde se montan las ruedas delanteras y traseras, además de las guías extensibles, la plataforma de giro y sus respectivos elementos de bloqueo.

Las tres ruedas delanteras, fabricada por la marca TENTE® soportan el peso de la máquina y de la carga, tanto en funcionamiento (realizando la transferencia del usuario) como en los desplazamientos de la máquina en sí. Las características de dichas ruedas se pueden observar en los anexos.

Las cuatro ruedas posteriores, fabricada por la marca TENTE® tienen la misión de estabilizar la máquina cuando se realiza el levantamiento del usuario y así garantizar la estabilidad de la grúa. Las características de dichas ruedas se pueden observar en los anexos.

Las guías extensibles en ambas direcciones tienen la misión de garantizar la estabilidad de la grúa cuando se realiza el giro en sentido de donde se hayan posicionado las guías. La guía delantera tiene un sistema manual de bloqueo, el cual evita que durante los desplazamientos de la máquina pueda extenderse la guía, y también evitar la inserción a su posición original de la guía cuando se está realizando la transferencia.

La guía posterior lleva incorporado un sistema de bloqueo manual, accionado por una anilla unida a dos sirgas las cuales liberan dos posicionadores, dejando libre la guía para realizar la extensión en ambos lados. Una vez se suelta la anilla los posicionadores vuelven a su posición inicial y la guía, totalmente extendida a uno de los lados de la grúa, queda fijada evitando la inserción a su posición original cuando se está realizando el proceso de transferencia.

La plataforma es el elemento donde el usuario estará de pie y donde apoyará los pies. Este componente será el encargado de realizar el giro del usuario previamente habiendo deslizado las guías en el mismo sentido al cual se quiere girar. Si las guías no están correctamente extendidas, la plataforma no puede girar gracias a sus elementos de bloqueo. Hasta que las guías no estén en su posición correspondiente, el operario no va a poder realizar el giro de la plataforma. Además de los elementos de bloqueo de las guías que afectan al giro de la plataforma, el operario, para poder realizar el giro de la plataforma ha de accionar la maneta del freno ubicada en una de las asas de manejo. Esta maneta de freno acciona un

posicionador que bloquea la plataforma contra la base en cada una de las posiciones de transferencia de la grúa.

En la plataforma se montan los siguientes componentes: mástil, soporte de pies y base de bloqueo.

El mástil principal es el componente donde van montados los elementos eléctricos, así como el actuador, la unidad de control más batería y el mando. En este elemento se le unen, el apoyo de piernas y el mástil superior. Dicho mástil lleva incorporado en la parte superior unas asas para que el operario pueda realizar el giro del usuario con mayor comodidad y control. En una de estas asas lleva fijada una maneta de freno la cual actúa sobre el posicionador de la plataforma, evitando que la plataforma pueda girar hasta que el operario lo considere oportuno.

El mástil superior es el elemento donde se fija por un extremo al mástil principal. Por la parte central se une el actuador eléctrico, el cual levanta el mástil superior apoyándose en el principal.

El arnés se fija a la parte superior del mástil superior mediante unos pomos atornillados. La forma del mástil en la parte más cercana al usuario tiene forma de manillar para que el usuario pueda colocar y agarrarse con las manos mejorando la sensación de estabilidad.

4.2.- Utilización

Para transferir el usuario de una silla de ruedas a un inodoro se seguirán los siguientes pasos:

1. Desplazar la grúa hasta el inodoro donde se quiera llevar al usuario. Colocarla perpendicular al inodoro y extender las guías extensibles hasta que estas queden una en cada lado del inodoro.

2. Frenar las ruedas delanteras con el freno que llevan incorporadas.

3. En la guía delantera levantar el inmovilizador en forma de “L” con una mano y con la otra estirar de la guía hasta su longitud máxima (Alerta: si la guía no se extiende en su totalidad, el inmovilizador no actuará y la guía no quedará fijada con lo cual podría desplazarse).

4. La guía trasera va fijada por dos fijadores retractiles los cuales se pueden retirar tirando de la anilla que se encuentra en la zona delantera de la base. Extender la guía hasta la su longitud máxima (Alerta: si la guía no se extiende en su totalidad, el inmovilizador no actuará y la guía no quedará fijada con lo cual podría desplazarse).

5. Llevar al usuario hasta el lavabo donde este la grúa y colocar la silla de ruedas en la parte posterior de la grúa, introduciendo la base por debajo de los reposapiés de la silla hasta que los pies lleguen a la vertical de la plataforma.

6. Colocaremos el arnés al usuario y lo uniremos mediante los anclajes al mástil superior, de acuerdo con la altura y peso del usuario.

7. Levantar los pies del usuario si no puede hacerlo por sí mismo y apoyarlos en la plataforma. Pasar por detrás de las piernas la cinta para sujetar las piernas, ajustar lo máximo a la pierna con el apoyo de goma y unir el velcro de la cinta.

8. El personal autorizado se coloca delante de la grúa y con el mando puede levantar al usuario de la silla de ruedas mediante el accionamiento del actuador y el levantamiento del mástil superior.

9. Una vez el usuario esté en reposo y totalmente levantado encima de la plataforma, el personal autorizado acompañante desbloqueará la plataforma con la maneta de freno situada en una de las asas del mástil. La plataforma está lista para realizar un giro de 90 grados, en sentido hacia donde se hayan extendido las guías. NOTA: en sentido opuesto queda bloqueada la plataforma para evitar el vuelco de la grúa.

10. Con el mando, descender al usuario que ha quedado de espaldas al inodoro para que pueda realizar sus necesidades.

NOTA: Para trasladar al usuario des de del inodoro a la silla se seguirá el proceso inverso. Para recuperar las guías a su posición inicial se deberá levantar el inmovilizador delantero e introducir la guía y para la trasera hay que tirar de la anilla e introducir la guía.

ADVERTENCIA: No colocar los dedos en las zonas donde exista riesgo de atrapamiento (zona de giro, bisagras, etc.). El usuario nunca debe ir descalzo en el momento de ser trasladado por la grúa, siempre irá calzado con zapatos de calle o cerrados totalmente.

5.- PLAN DE MANTENIMIENTO

Se debe realizar un mantenimiento preventivo del equipo para alargar su vida útil y evitar accidentes.

El mantenimiento de la grúa de bipedestación giratoria descrita será el siguiente:

5.1.- Semanalmente:

- Se comprobará visualmente el estado general de la grúa de bipedestación giratoria, y la existencia de deformaciones, fisuras, dobleces y/o roturas que puedan poner en peligro la integridad del usuario. En caso de existir y que afecten gravemente a la seguridad y su funcionamiento se INUTILIZARÁ y se avisará al equipo de mantenimiento para su reparación.

- Se comprobará el estado de las ruedas y los frenos de estas que se encuentran en buen estado.

- Se revisaran los bloqueos de las guías extensibles y de la plataforma para que trabajen de la forma correcta. En caso de existir algún problema en estos elementos se INUTILIZARÁ y se avisará al equipo de mantenimiento para su reparación.

- Revisar los elementos de giro, para un correcto funcionamiento y engrasar en caso necesario.

- Revisar los elementos desplazables, guías, apoyo de piernas, actuador eléctrico.

- En los elementos eléctricos Dewert®, se seguirá el mantenimiento indicado por este fabricante. (Ver anexo)

5.2.- Cada 4 meses:

- Limpiar la plataforma con agua jabonosa o productos no agresivos.
- Engrasar las partes y piezas que sea necesario.
- Reapretar los tornillos y tuercas que sea necesario.
- En los elementos eléctricos Dewert®, se seguirá el mantenimiento indicado por este fabricante. (Ver anexo)

NOTA: En las grúas de bipedestación giratoria en las que se haya producido un accidente o avería, y por lo tanto, hayan estado sometidas a esfuerzos, se INUTILIZARÁN, se REVISARÁN y se CAMBIARÁN todos los elementos deteriorados para su nueva puesta en servicio autorizada por el Usuario responsable u Operador Autorizado.

6.- RESOLUCIÓN DE AVERÍAS

Las averías más usuales que se pueden presentar en la silla de ruedas descrita son las siguientes:

ZONA ESTUDIADA	PROBLEMA	CAUSA	SOLUCIÓN
Actuador	No se eleva correctamente el mástil superior.	• El cilindro hidráulico no funciona correctamente. • Posibles fugas en el cilindro hidráulico.	• Cambiar los retenes del cilindro hidráulico. • Falta de presión en el cilindro hidráulico.
Plataforma	No gira la plataforma correctamente.	• Los cojinetes no están engrasados. • Los frenos están bloqueados. • El posicionador de la plataforma está bloqueado. • La sirga de accionamiento del posicionador está rota.	• Engrasar los cojinetes. • Cambiar en caso necesario. • Sustituir el posicionador. • Sustituir la sirga.
Guías Extensibles	No se pueden desplazar.	• Inmovilizadores bloqueados. • Guías obstruidas.	• Revisar el sistema de inmovilizadores. • Limpiar el sistema de guías.
Ruedas	No giran correctamente.	• Suciedad en los elementos de giro.	• Revisar y engrasar los elementos de giro.
Inmovilizadores guía trasera:	No se desclavan	• Sirga rota. • Sirga bloqueada. • Inmovilizadores bloqueados.	• Cambiar la sirga. • Desbloquearla y engrasarla. • Sustituir los inmovilizadores.

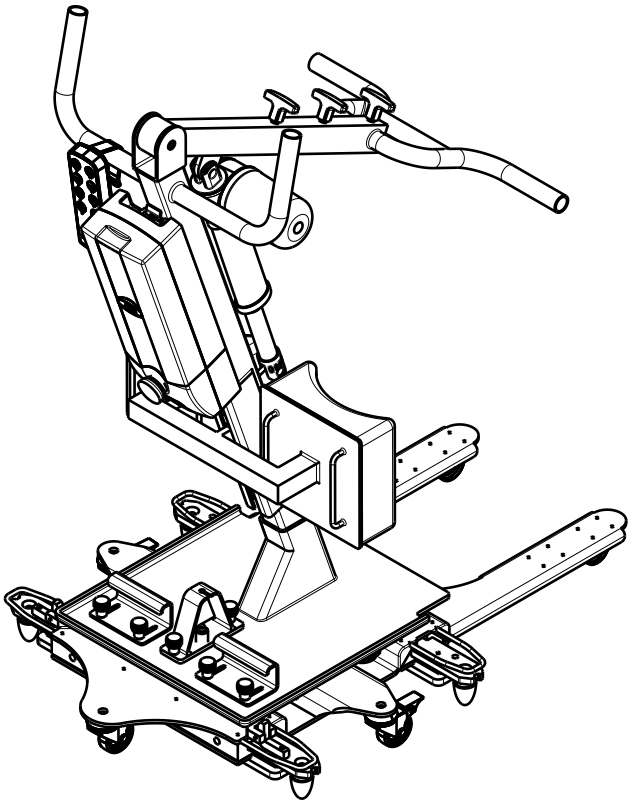
ATENCIÓN: CONSIDERACIONES GENERALES.

- **Se deberán seguir todas las normas de Seguridad y Salud en el Trabajo, tanto** locales **como** autonómicas **y/o** nacionales, **cuando se trabaje con este equipo o se realice cualquier tipo de reparación o mantenimiento sobre el mismo.**

- **Es OBLIGATORIO que cuando se realice alguna operación de mantenimiento y/o reparación sobre la** instalación eléctrica **sea realizada siempre por Personal Autorizado.**

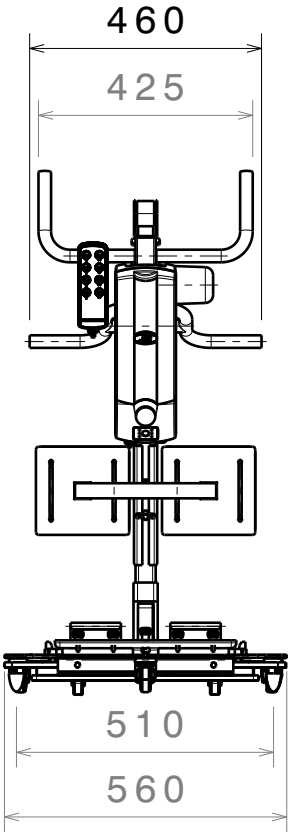
7.- PLANOS VARIOS

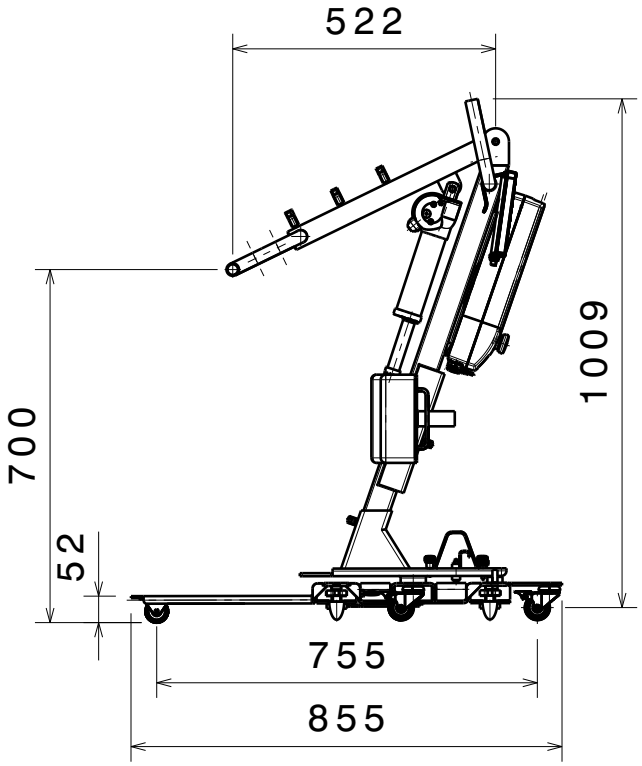
7.1.- PLANO DE CONJUNTO.

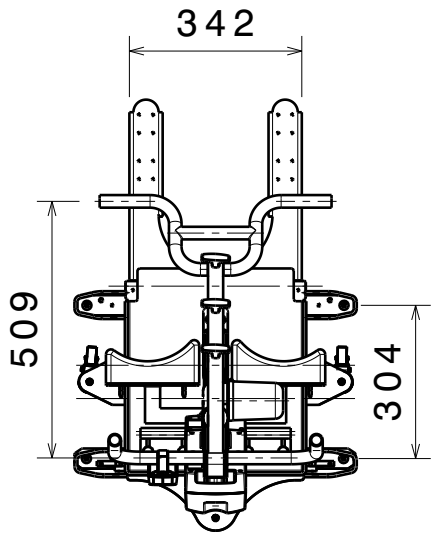


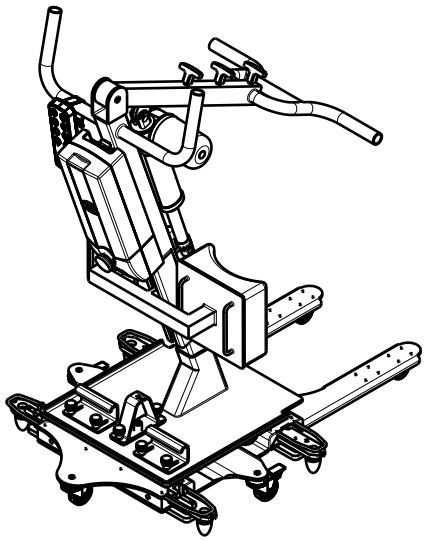
Vista Isomètrica
Escala 1:10

PROJECCIÓ	Quantitat:	CREA & AJUDA S.L			
	Material:				
	Tractament:	PROJECTE: GRUA BIPEDESTACIÓ GIRATÓRIA			
DIBUIXAT: M.Torra	DATA 19/01/2012				
REVISAT: M.Torra	DATA 19/1/2012	TAMANY A4	DENOMINACIÓ PEÇA: PLÀNOL DE CONJUNT		REV 00
DISSENYAT: M.Torra	DATA 19/1/2012	ESCALA 1:3	PES(kg) XXX	Material	VISTA 1/1

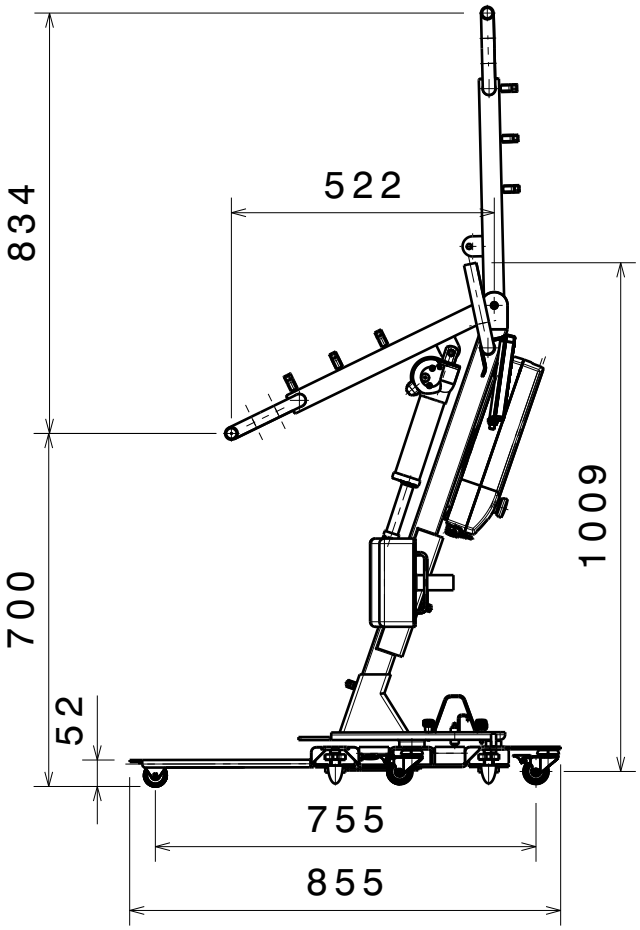




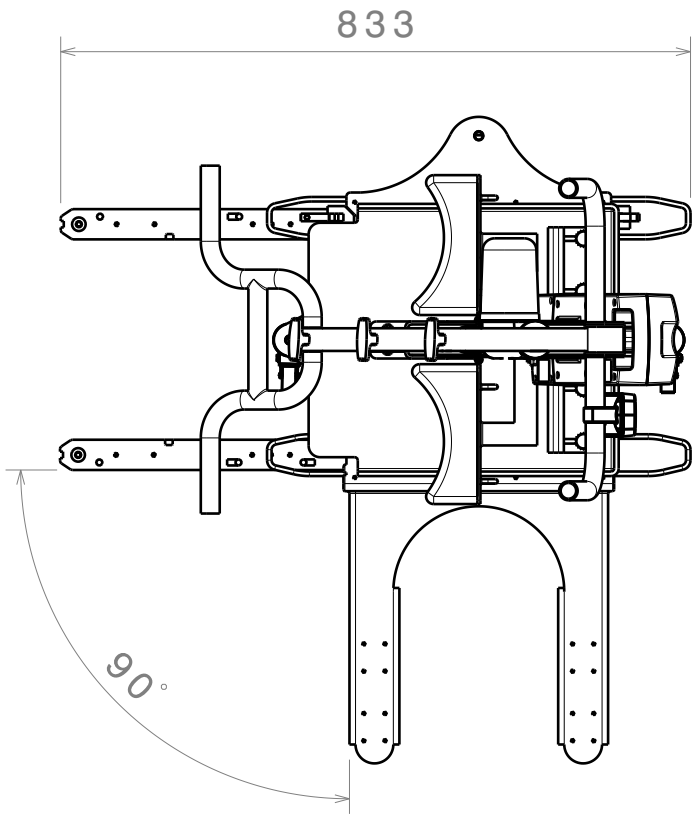


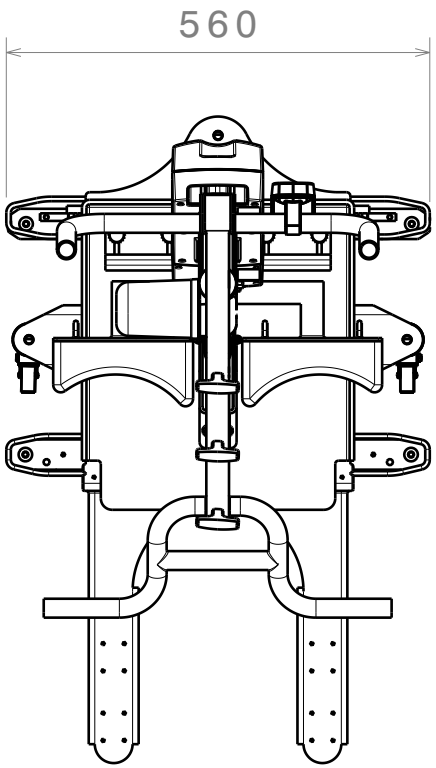


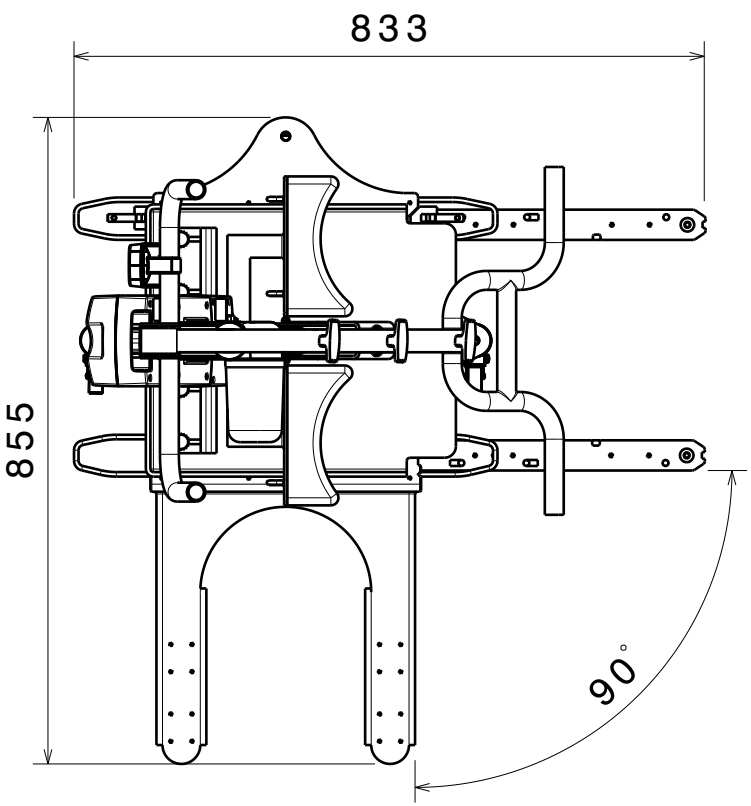
PROJECCIÓ	Quantitat:	CREA & AJUDA S.L			
	Material:				
	Tractament:	PROJECTE:			
DIBUIXAT: M.Torra	DATA 19/01/2012	GRUA BIPEDESTACIÓ GIRATÓRIA			
REVISAT: M.Torra	DATA 19/1/2012	TAMANY A4	DENOMINACIÓ PEÇA: PLANTA, ALÇAT I PERFIL		REV 00
DISSENYAT: M.Torra	DATA 19/1/2012	ESCALA 1:15	PES(kg) XXX	Material	VISTA 1/1



PROJECCIÓ	Quantitat:	CREA & AJUDA S.L	
	Material:		
	Tractament:	PROJECTE: GRUA BIPEDESTACIÓ GIRATÓRIA	
DIBUIXAT: M.Torra	DATA 19/01/2012		
REVISAT: M.Torra	DATA 19/1/2012	TAMANY A4	DENOMINACIÓ PEÇA: RADI GIR MÀSTIL SUPERIOR — REV 00
DISSENYAT: M.Torra	DATA 19/1/2012	ESCALA 1:15	PES(kg) XXX — Material — VISTA 1/1

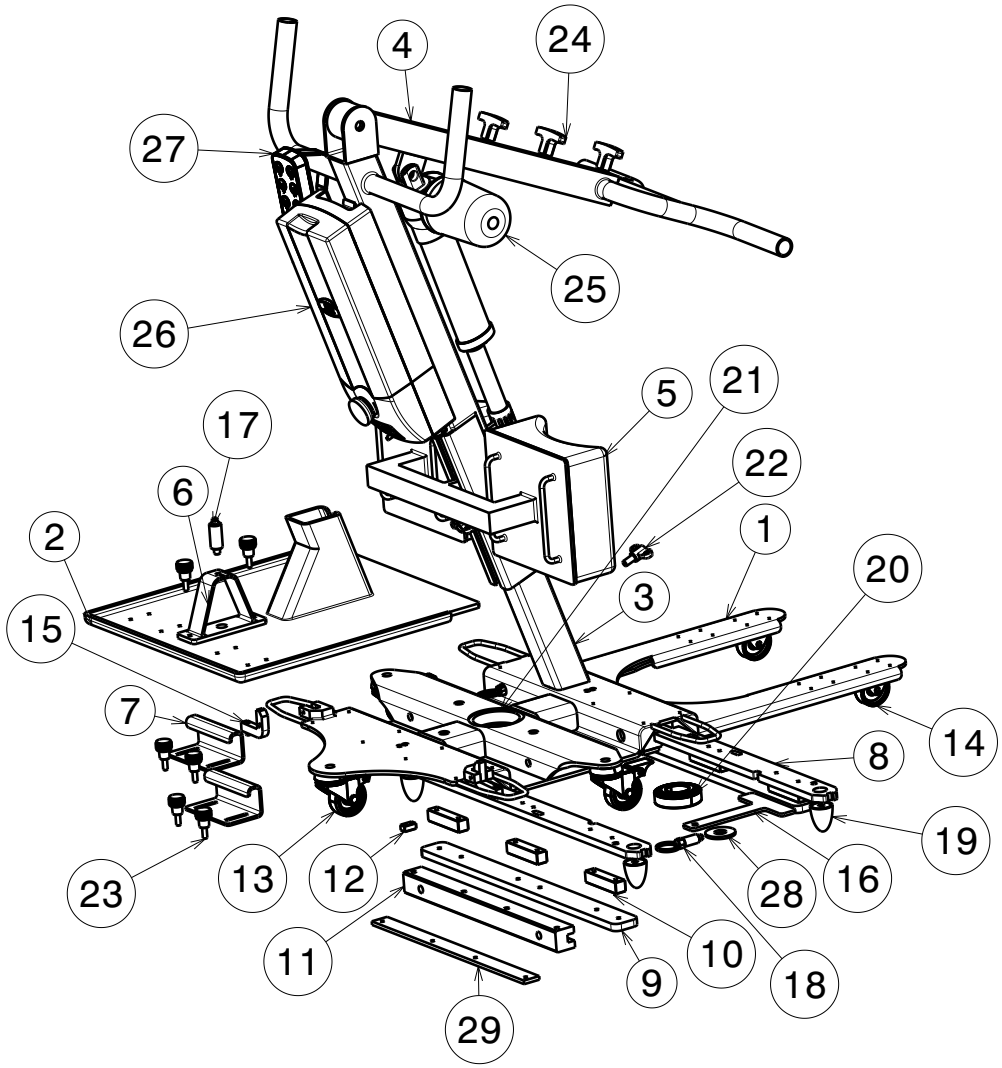






PROJECCIÓ	Quantitat:	CREA & AJUDA S.L	
	Material:		
	Tractament:	PROJECTE: GRÚA BIPEDESTACIÓN GIRATORIA	
DIBUIXAT: M.Torra	DATA 20/02/2012		
REVISAT: M.Torra	DATA 20/02/2012	TAMANY: A4	DENOMINACIÓ PEÇA: PLANO DE CONJUNTO: GIRO — REV: X
DISSENYAT: M.Torra	DATA 20/02/2012	ESCALA 1:10	PES(kg): XXX — VISTA: 1/1

PLANO DE CONJUNTO		
Item	Descripción	Uds
1	Base	1
2	Plataforma	1
3	Mastil	1
4	Mastil Superior	1
5	Soporte Piernas	1
6	Base fijacion plataforma	1
7	Soporte pies	2
8	Guía extensible superior	2
9	Guía extensible inferior	2
10	Separador de guías	6
11	Guía soporte extensible	4
12	Tope Guia extensible	2
13	Ruedas delanteras	3
14	Ruedas traseras	4
15	Inmovilizador en L	2
16	Inmovilizador guia ext.posterior	1
17	Halder: Posicionador Plataforma 221200068	1
18	Halder: Posicionador guía posterior 221200728	2
19	Halder: Silent block 251500533	4
20	SKF: 30206 Cojinete cónico	2
21	Soporte cojinetes	1
22	Elesa: Mariposa fijación M8x16	2
23	Elesa: Pomo unión M6x20	6
24	Elesa: Pomo fijación arnés M8x16	3
25	Dewert: Megamat 2	1
26	Dewert: Accucontrol 4.5	1
27	Dewert: Mando Iproxx	1
28	Arandela	1
29	Soporte fijación guía plástico	4



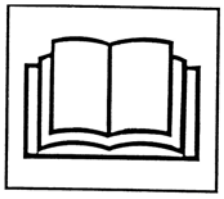
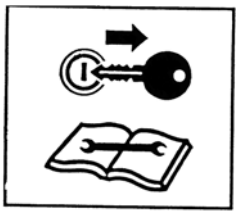
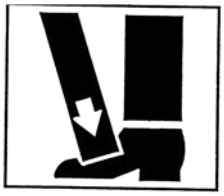
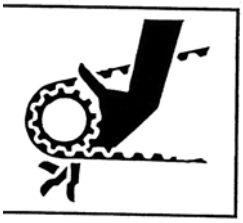
PROJECCIÓ	Quantitat:	CREA & AJUDA S.L	
	Material:		
	Tractament:	PROJECTE: GRÚA BIPEDESTACIÓN GIRATORIA	
DIBUIXAT: M.Torra	DATA 20/02/2012		
REVISAT: M.Torra	DATA 20/02/2012	TAMANY: A4	DENOMINACIÓ PEÇA: PLANO DE CONJUNTO: DESPIECE — REV: X
DISSENYAT: M.Torra	DATA 20/02/2012	ESCALA 1:1	PES(kg) XXX — VISTA 1/1

7.2.- LEYENDA DE SEÑALIZACIÓN.

PICTOGRAMAS

Dispositivos de información.

Para informar de los diversos peligros se colocarán los siguientes pictogramas de advertencia:

ITEM	*DESCRIPCIÓN*		
1			
• Es OBLIGATORIO antes de su utilización y de realizar cualquier manipulación en la silla *(reparación, cambio, etc…)* leer el ***Manual de Instrucciones.***			
2			
• ¡ATENCIÓN! PELIGROS DIVERSOS: *de cortadura, cizallamiento, aplastamiento, etc…* • EXTREMAR las precauciones en las zonas de los frenos, ruedas y en las articulaciones de las barras.			
3		• ¡ATENCIÓN! Está PROHIBIDO utilizar la grúa en terreno con pendiente. El suelo siempre ha de estar horizontal respecto a la máquina. • Está prohibida la utilización de la grúa en terrenos inestables, pavimentos que no soporten la carga de la grúa y puedan producir el vuelco de la misma.	

MANUAL ORIGINAL	***Grúa de bipedestación giratoria de accionamiento manual para la transferencia de discapacitados y enfermos, uso en interior.*** ***Marca*** *SOLMATS®* ***Mod.*** *GBR 11*
Fabricante: CREA & AJUDA S.L.	**FEBRERO DE 2012**

8.- CERTIFICADO DE ENTREGA Y GARANTIA

TIPO DE EQUIPO:

Grúa de bipedestación giratoria de accionamiento manual para la transferencia de discapacitados y enfermos, uso en interior.

MARCA: SOLMATS®

MODELO: GBR 11

Nº FABRICACIÓN: A01

FECHA DE FABRICACIÓN: FEBRERO 2012

Empresa o razón social: CREA & AJUDA S.L.

Dirección: C/ Vilalta, n° 3.
C.P. 25.748

Población: CABANABONA
Provincia: **LLEIDA**
País: **ESPAÑA**

Este equipo me ha sido suministrado hoy nuevo por:

_____

La entrega ha sido efectuada correctamente y queda entendido que la garantía y las condiciones de uso y utilización me han sido detalladamente explicadas y por mi aceptadas y entendidas.

Fecha de entrega del equipo e inicio de garantía: _____ / _____/ 20 ____

Firma y sello del Fabricante o Distribuidor Autorizado

Firma del comprador o persona legalmente autorizada

CONDICIONES DE GARANTIA

1. CREA & AJUDA S.L. garantiza todos los productos nuevos por ella fabricados, de aquellos defectos de material o fabricación que comprueben y reconozcan los servicios técnicos de dicha Compañía, durante un periodo de **2 años,** contado a partir de la fecha indicada en este certificado.

2. La garantía no cubre artículos fabricados por otras compañías, que disfrutarán solo de la garantía que éstas concedan, siempre que no se especifique lo contrario por parte del Fabricante.

3. La responsabilidad del Fabricante se limita a la sustitución o reparación de las piezas reconocidas como defectuosas, no incluyendo los daños personales o perjuicios que pueda ocasionar tal avería.

4. La garantía cubre exclusivamente las piezas defectuosas, los demás gastos (desplazamientos, mano de obra, transportes, carga y descarga, penalizaciones, etc.) son por cuenta del usuario.

5. El Fabricante declina toda responsabilidad judicial por averías o accidentes que puedan imputarse directa o indirectamente al mal uso de nuestros materiales, estén o no en periodo de garantía.

6. La garantía quedará cancelada en el momento en que el equipo sea objeto de:

   - Modificación no homologada por el Fabricante, se le hayan instalado recambios no originales o sea manipulada por un taller no autorizado ni perteneciente a nuestra red.
   - Utilizar el equipo sin haber hecho leído previamente el *Manual de Instrucciones.*
   - Daños producidos por sobreesfuerzos.
   - Incorrecta manipulación y utilización del equipo por personal sin una formación específica.

7. Antes de usar el equipo, el Usuario declara haber leído detenidamente y entendido el contenido del *Manual de Instrucciones.*

9.- CERTIFICADO DE DECLARACIÓN DE CONFORMIDAD C.E.

CERTIFICADO DE DECLARACIÓN DE CONFORMIDAD C.E.

CE

Con el presente, el FABRICANTE:

Nombre:	CREA & AJUDA S.L.
NIF:	B-25.626.540.
Dirección:	Calle Vilalta, nº 3. 25748 CABANABONA (Lleida)
Teléfono:	**+**34-973 460 049.

De la máquina:

Tipo de máquina:	Grúa de bipedestación giratoria de accionamiento manual para la transferencia de discapacitados y enfermos, uso en interior.
Clase producto sanitario:	Clase I.
Marca:	SOLMATS®
Modelos:	GBR 11
Nº de fabricación:	A01
Año de fabricación:	2012
Masa de la silla:	58 Kg.
Masa máx. total a transportar:	125 Kg.

Datos de las ruedas:

Fabricante:	TENTE®
Tipo de rueda delantera:	2975PJO050P30
Capacidad de carga:	70 Kg
Tipo de rueda trasera:	1430POI038P60-46x38
Capacidad de carga:	25 Kg

Datos parte eléctrica:

Dispositivo de control:	MEGAMAT 2, ACCUCONTROL 4.5, IPROXX SE/SE+ (Dewert)®

DECLARA:

Que la máquina comercializada satisface todos los requisitos esenciales de seguridad y de salud correspondientes en aplicación de la Directiva Europea de Seguridad de Máquinas 2006/42/CEE.

A si mismo las directivas *93/42/CEE relativa a los productos sanitarios,* 2006/95/CE *relativa a baja tensión y 2004/108 de la compatibilidad electromagnética.* No quedan incluidos en este certificado los elementos fabricados por terceros, pues tienen su propia certificación, pero sí su instalación.

Para tal fin se han cumplido estrictamente las normas:

- UNE-EN ISO 12100-1
- UNE-EN ISO 12100-2
- UNE-EN ISO 14121-1
- UNE-EN ISO 10535:2007

Y para que así conste firma el presente certificado en Cabanabona en Julio de Dos Mil Diez.

Nombre: **Sr. Miquel A. Torra Sorribes**

Cargo: **Administrador**

10.- DEFINICIÓN DE LA MARCA *CE* QUE DEBERÁ LLEVAR EL EQUIPO.

CREA & AJUDA, S.L.	
C/ Vilalta, 3 **25748 CABANABONA (Lleida)** **www.movembe.es** CE	***GRÚA DE BIPEDESTACIÓN GIRATORIA*** **MARCA :** SOLMATS **MODELO :** GBR 11 **Nº SERIE :** **A01** **AÑO :** **03/2012** **CARGA MAXIMA :** **125 kg** **VOLTAJE :** **24 V/DC**

11.- ESQUEMAS DE COMPONENTES, SUBCONJUNTOS Y CIRCUITOS.

Instrucciones de montaje de la parte eléctrica en las instrucciones proporcionadas por Dewert. (Anexo).

Installation Instructions

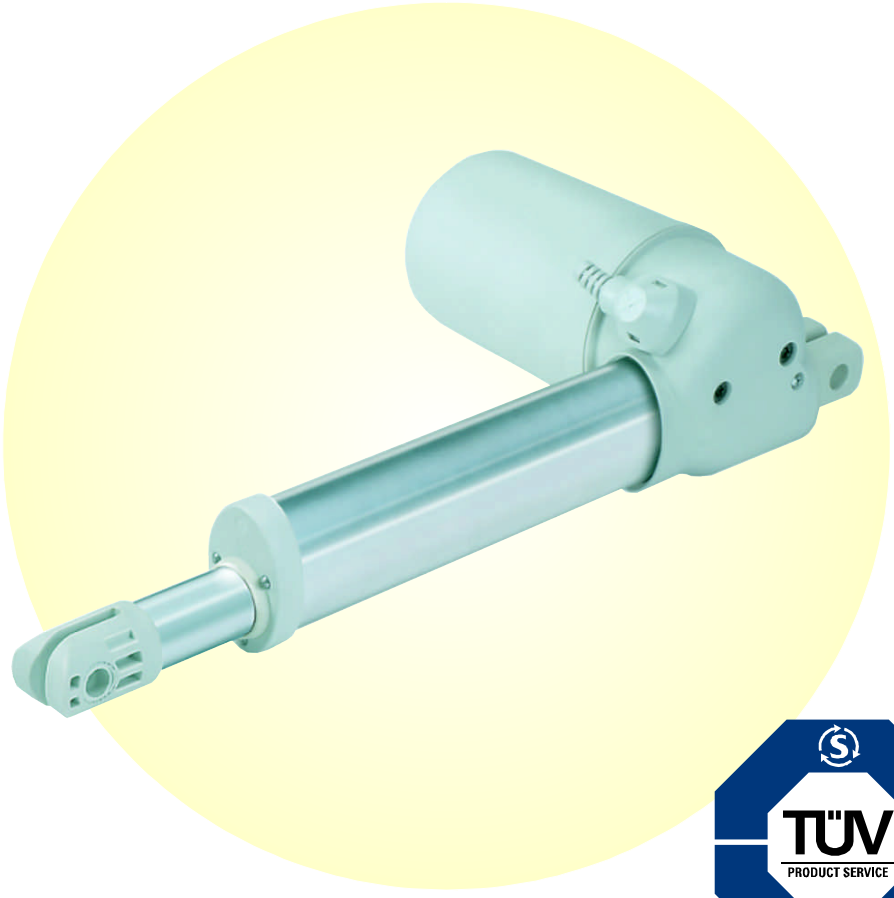
Issue
06/2008

DEWERT
A Phoenix Mecano Company

Installation Instructions for the Manufacturer of the End Product

MEGAMAT 2

Drive System



TÜV PRODUCT SERVICE
Produktion überwacht
Bauart geprüft

06/2008
ID-Nr. 48148

MEGAMAT 2

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Designated Use..... 3

Prerequisites..... 3

Getting to Know the System..... 3

Fitting..... 6

Operation..... 8

Maintenance and Repairs..... 12

Type Label and Seal..... 13

Trouble-Shooter's Guide..... 14

Cleaning and Care..... 15

Manufacturer's Declaration, Declarations of Conformity, Additional Information..... 16

General Information

These instructions are intended for the manufacturer of the end product and are not designed for passing on to the operator of the end product. With regard to the specialist information contained herein, these instructions can well serve as a basis for drawing up the instructions for the end products.

It is essential to note the information contained in these instructions! In doing so, you can prevent mistakes being made in installing or connecting the system which could result in

- **injury and accidents as well as**
- **damage** to the drive system or the end product.

Use only DEWERT drive control units!

The DEWERT drive control unit incorporate an earth-free circuit which is isolated from the supply mains by reinforced insulation or double insulation.

DEWERT **accepts no liability** for damage caused as a result of …

- non-observance of these instructions,
- alterations to the product not approved by DEWERT or ...
- the use of spare parts not manufactured or approved by DEWERT- these may not ensure adequate safety!

Due to the policy of ongoing product improvement, DEWERT reserves the right to carry out technical changes at any time without prior notification!

1. Designated Use

The **MEGAMAT 2** drive system is **designed for installing in end products**…

- for the motorized adjustment of movable furniture parts **using suitable fittings/ mountings or mechanics**.

The **MEGAMAT 2** drive system is **not intended for use**...

- in an environment where **inflammable** or **explosive** gases or vapours (e.g. anaesthetics) are likely to occur.
- in a damp environment, i.e. outdoor,
- by small children or fragile persons,
- in the immediate vicinity of young children.

2. Prerequisites

The installation steps descriped in these instructions must be performed by a **suitable qualified** or **trained person**.

- This being the case, you should never carry out this work by **yourself** unless you are a **suitable trained person** or
- you should **entrust** this work to a **suitable qualified, skilled or trained person only**.

Conformity in accordance with EC Directives

The drive system is supplied ex factory as a **machine not ready for use** in accordance with the EC "Machinery" Directive. In other words, you may not put the drive system into operation until you have met the **safety** objectives of the "Machinery" Directive and issued a corresponding **Declaration of Conformity**!

The drive system with DEWERT controls meets the safety objectives of the EC Directives concerning **"Low Voltage"** and **"Electromagnetic Compatibility (EMC)".**

The drive is **not a medical product** if you install it into a medical device, manufacture in **conformity** with the EC Directive for "Medical Products" or other regulations it is the responsibility of the **manufacturer of the end product**. For this purpose, DEWERT has additionally applied, fully or partially, a number of standards from the medical products sector, in order to facilitate use in medical products (see page 17, Additional Information).

3. Getting to Know the System

The **MEGAMAT 2** drive system is intended for the German market and complies with the Law applicable in Germany in implementation of relevant EC Directives.

With regard to other variation options contact your after-sales service or take a look at the current catalogue. We will be happy to assist you with any special requests you may have.

MEGAMAT 2

a) Technical Data

Rated voltage.....:	24 V DC
Power consumption with rated load.....:	max. 5 A DC (depending on application)
permissible push force.....:	max. 4000 N (6000 N) (depending on version)
permissible pull force.....:	max. 4000 N (depending on version)
Operating mode[1] with max. rated load.....:	Intermittent duty (AB) 2 min./18 min.
Protection classification.....:	III
Noise level.....:	65 dB(A)
Drive type.....:	Single drive
Type of load.....:	Push; pull
Stroke[2].....:	< 425mm
Adjustment Speed[3].....:	to 38.5 mm/s (depending on version)
Protection category.....:	IP20 (IP44, IP66 optional)
Colours.....:	grey; black
Emergency release “ER”.....:	500 N, 1500 N and 2000 N
Quick release “GQR”.....:	up to 3000 N
Cable versions.....:	Cable for permanent mains installation or cable with attached plug

Dimensions and Weights

Length x width x height of the drive.....:	min. 175 x 160 x 88 mm (without adjustment) min. 175 x 185 x 88 mm (with “ER”) min. 221 x 160 x 88 mm (with “GQR”)
Weight.....:	approx. 1.7 kg (depending on version)

Ambient Conditions

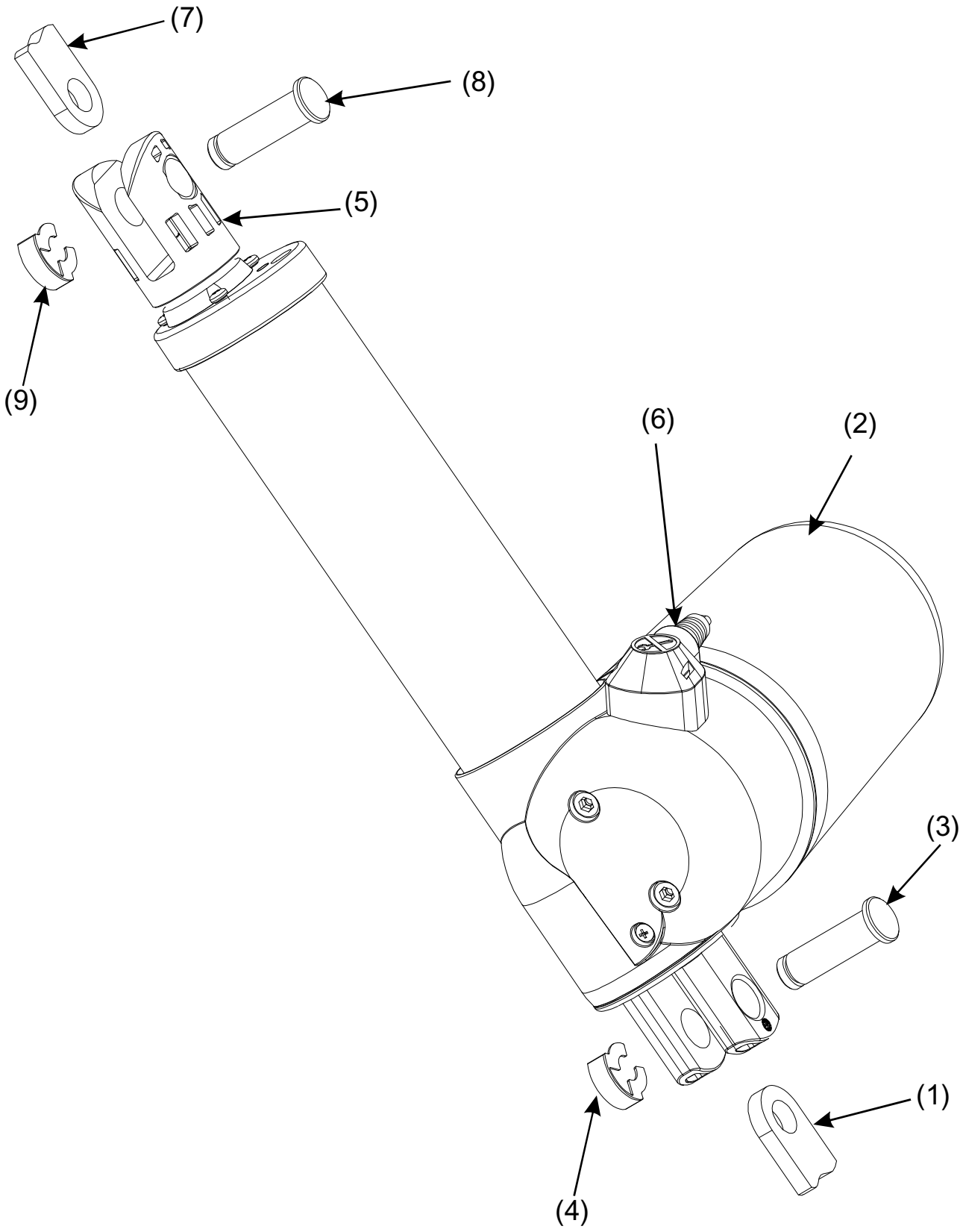
Room temperature.....:	from +10° to +40° C
Relative humidity.....:	from 30% to 75%
Barometric pressure.....:	from 700 hPa to 1060 hPa

[1] Operating mode = **intermittent duty (AB) 2 min./18 min.**, i.e. run for a maximum of 2 min. under rated load, then observe a **rest period** of 18 min. Operational failure could otherwise result.

[2] Data deviating from these standard values can be established after consultation and depending on the application.

[3] Adjustment speed = **speed** at which the clevis travels **without load** (speed varies according to the load).

Assembly of the MEGAMAT 2 Single Drive



4. Fitting

a) Installation (see illustration on page 6)

Caution!

Only ever connect or disconnect electrical components when they are voltage-free.

1) Push **drive (2) into mounting (1)** and fasten it there using **BEK bolt (3)** and secure with **security clip (4)**.
2) Now **fasten stroke pipe clevis (5)** with **BEK bolt (8)** and **security clip (9)** onto mounting **(7)**.
3) Now connect the drive to the **DEWERT control unit. Secure cable (6) to prevent it from being pulled out** (please also refer to the Installation Instructions supplied with the DEWERT control units).

Recommendation: Please bear in mind that installing mechanical limit stops into your end product considerably increases the safety standard.

Attention!

For technical reasons or to save costs, mechanical limit stops are not always provided. In safety-critical drives we therefore recommend using an additional safety limit switch which in the event of a defective top limit switch protects against dangerous excess travel and failure. The safety limit switch puts the drive permanently out of action as soon as any overshooting of the regular limit switch takes place. The safety limit switch is integrated directly into the drive and does not require any additional fitting. However this can increase the fitting dimension of the drive by 23 mm.

Attention!

The version of the **MEGAMAT 2** drive system with loose nut seat **requires** a fixed mechanical stop in the end product in order to prevent the stroke tube from being pulled out. This could otherwise damage the drive system.

b) Electrical Connection

In the **Operating Instructions** to be issued by you, point out to the operator that if leads, in particular the **connection lead**, are **driven over** they could sustain damage. **Mechanical loads should also be avoided.**

When routing the leads make sure that they:

- cannot get caught up or trapped,
- are not subjected to mechanical loads (i.e. do not pull, apply pressure or bend),
- cannot get damaged in any other way.

Make sure that the cables, in particular the **connection lead**, are fastened to the end product with adequate **strain relief** and **kink protection** and that suitable constructional measures prevent the **connection lead from trailing on the floor** when the end product is being **moved**.

c) Dismantling

Operate the furniture to travel to the starting position, then isolate **drive (2)** from the DEWERT controls. When removing **security clip (4, 9)** and **BEK bolts (3, 8)**, it is important to **support drive (2)**, as this is released instantly!

d) Emergency release or quick release (option)

In the event of a power failure the drive can be reset via the release mechanism (”ER” or “GQR”) in as far as this is fitted. Actuating the release causes the drive to travel back to the starting position.

5. Operation

For drawing up the Operating Instructions for the end product, you can use the specialist information described herein. Please bear in mind that these instructions are intended for you as a specialist and not for the possibly non-technically trained operator of the end product.

Attention!

- **The electric adjustment drive is not intended for use by small children or the unsupervised infirm.**
- **The electric adjustment drive is not a toy for children to play with.**

a) Prerequisites

The **MEGAMAT 2** drive system is only intended for use with corresponding DEWERT control units.

In this connection please also follow the installation instructions supplied with the accompanying control unit.

b) Mechanical release functions (emergency or quick release)

If you have acquired a **MEGAMAT 2** drive system with mechanical release, please note the following:

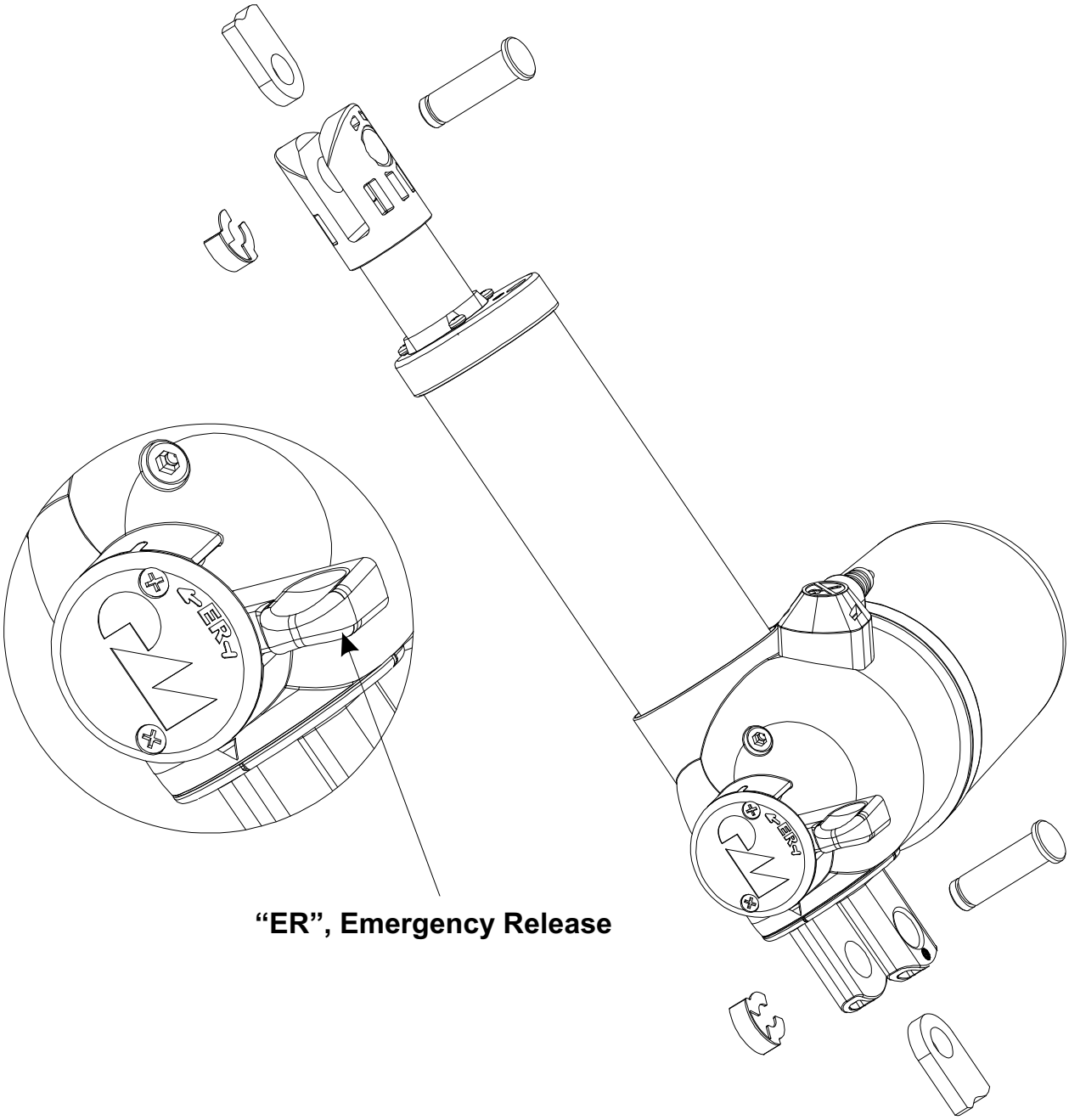
- A **mechanical release** enables you to move the drive manually in an emergency.
- Actuate the mechanical release and move the drive into the desired position.

Caution: Depending on version, it is possible that the application could lower itself under its own weight. If application is not possible to sink down with own weight, you must press down the right side of application.

- Once the ER or GQR is released and the drive system is restarted, the clutch automatically re-engages. The drive system is ready to be operated again.

The **MEGAMAT 2** is available as either a quick release for continued use (”GQR”, see page 10, 11) or as an emergency release only (”ER”, see page 9), i.e. to be used only in an emergency.

c) ER (Emergency Release)

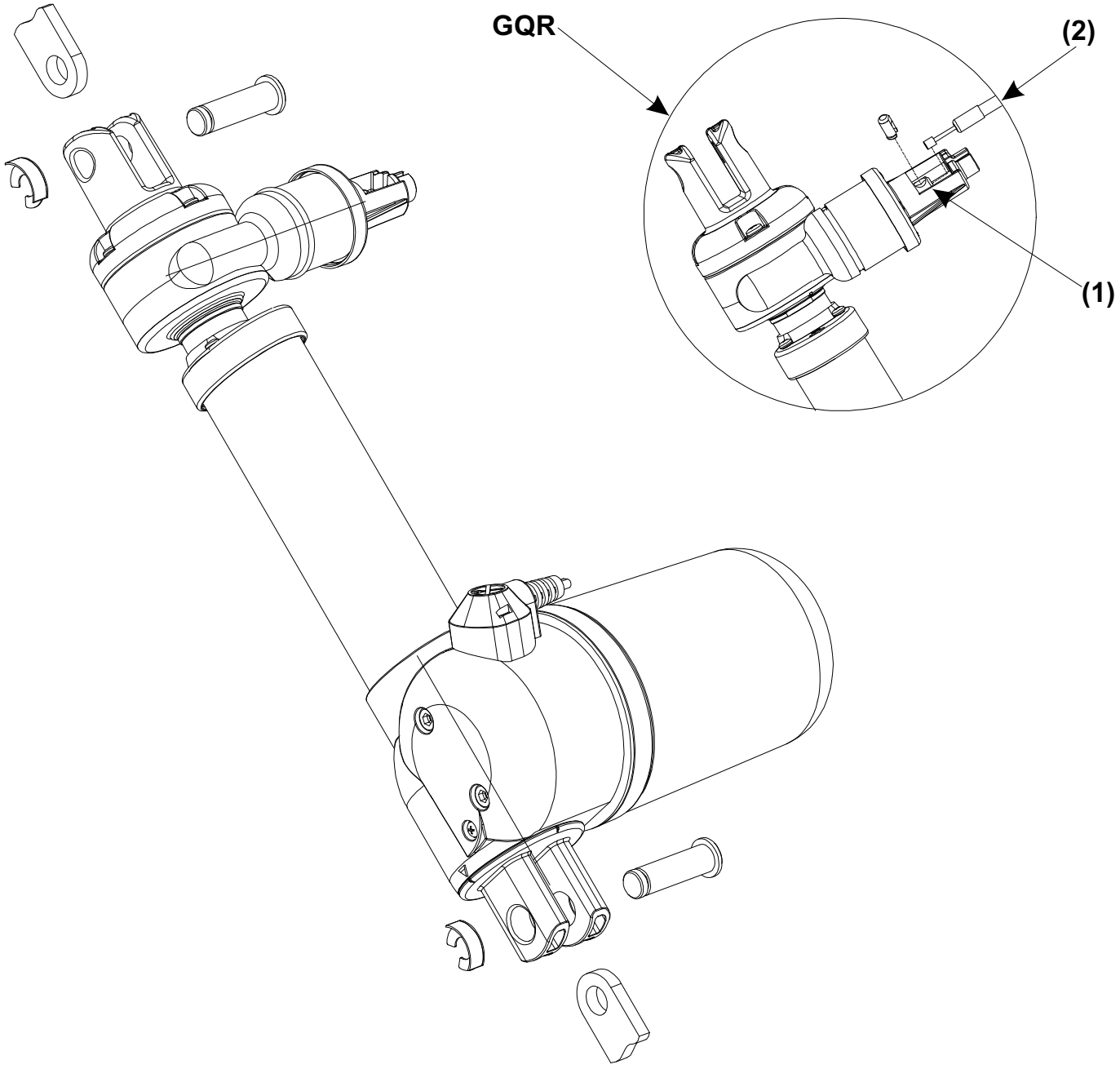


“ER”, Emergency Release

Please note:

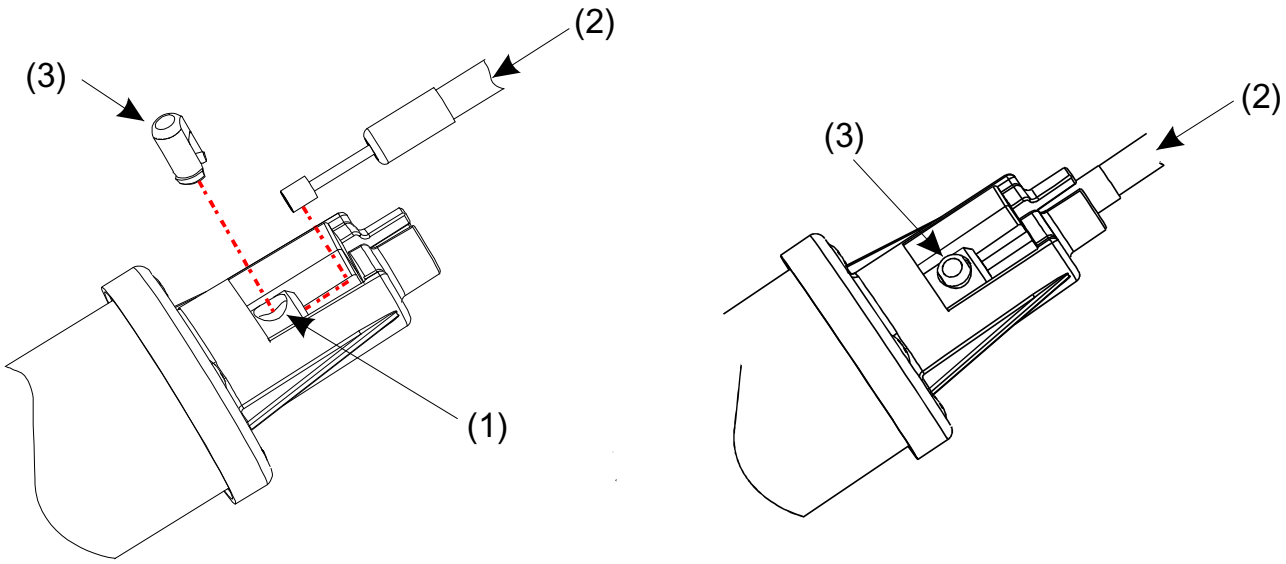
- Before actuation the drive or corresponding furniture component must be load-free.
- The emergency release (ER) is not designed for continued use and should therefore only be used in an emergency.
- The actuating mechanics are directly connected to the housing, attaching a Bowden cable is not possible.
- The disengaging lever must be fully actuated throughout the entire adjustment procedure. Engagement or partial engagement of the clutch can destroy the ER system.

d) GQR (Quick Release)



Please note:

- GQR (Quick Release) features a high quality gear system which can be actuated at any time, also in the loaded state.
- To allow actuation, a suitable commercially available **Bowden cable (2)** is provided. This is fastened in the **Bowden cable receptacle (1)** (not part of the supply package).
- Thread the Bowden cable fully through the groove in the **Bowden cable receptacle (1)** and into the cable bolt at the top, then secure the Bowden cable in place with the **locking pin (3)**.
- The tension of the Bowden cable should **not** be too tight, otherwise this could result in unintentional disengagement or cause the clutch in the GQR's gear system to slip which in turn can lead to damage.
- The Bowden cable must now be tested to ensure that it is in perfect working order.



Attention!

The GQR system is designed as a standard feature to be used for applications in the **drive's push direction**. When actuating the GQR, it is therefore important to ensure that the manual adjustment takes place in the **intended direction only**.

Non-observance can cause the GQR to sustain damage.

Moreover, another standard feature of the GQR is the trap protection for emergencies. **Non-designated actuation of the trap protection (operating the quick release without actuating the Bowden cable in the opposite direction to the designated direction) leads to increased wear and premature failure of the system.**

Please draw attention to this in your operating instructions.

e) Maintenance and Repairs

At regular intervals carry out the inspections in accordance with the BGV A3 (Instruction of the Professional Trade Association). The inspections must be performed by an electrical specialist.

The recommended inspection period is: **6 months**

In addition to the above, the following checks should be carried out at shorter intervals:

- **Regular visual checks** for damage of all kinds
  Check the housing for **cracks** and **fractures** and the connection lead for signs of **pinching** and **shearing-off**. Also check the **strain relief** with **kink protection**, in particular after each case of mechanical loading. Any **damaged connection leads** of equipment must be replaced by **the manufacturer** or **persons qualified** to do so (see page 3) in order to exclude hazards.
- **Regular functional testing of the "Quick Release, GQR"** by actuating the Bowden cable, as described on page 8,10 and 11.
- **Regular checks** of the Bowden cable of the "GQR quick release" at intervals to ensure that it is functioning correctly. If necessary, re-adjust!
- **Regular functional testing of the "Emergency Release, ER"** by actuating the release lever, as described on page 8 and 9.

  Check the limit switches by using the DEWERT control unit to make the drive travel to the end-of-travel positions.

Caution!
For Your Own Safety!

Shutdown in an emergency is achieved by pulling the mains plug out of the drive controls!

The **mains plug** must therefore be accessible **at all times** when the system is in operation to ensure it can be quickly **pulled out of the wall socket** in an emergency.

Movement of the drive takes place via a stroke pipe. Please bear this in mind when designing your product:

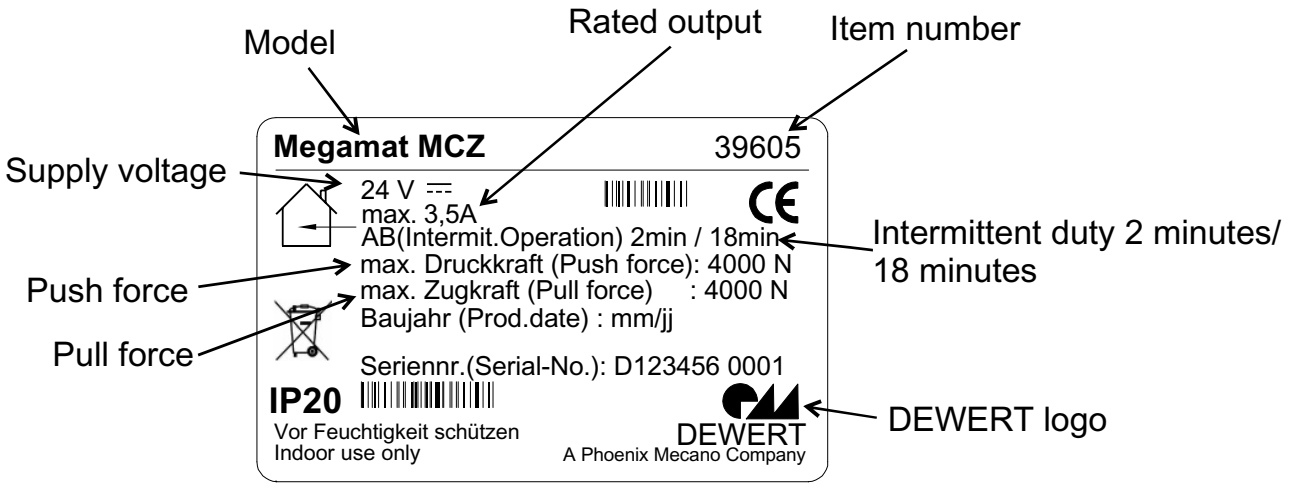
- After installing the **MEGAMAT 2** make sure that no shearing or trap/crush zones are accessible from the outside.

In the Operating Instructions to be drawn up by yourselves, it is essential that you draw the operator's attention to the points mentioned here.

6. Type Plate and Seal (Example)

Each drive component carries an identification plate giving the exact model, item number and technical specifications (see following figure as an example).

The **MEGAMAT 2** is designated on the type plate as **MEGAMAT MCZ**.



Graphical Symbols

CE — Conformity mark

IP20 — Protection category

Use in dry rooms only!

Do not dispose in your household waste!

In order to guarantee the safety of DEWERT products, a seal is attached to all DEWERT products. Opening the product damages the seal, thereby indicating that the drive has been altered or tampered with. The drive may only be opened by specialist personnel holding the qualifications as described on page 3.

7. Trouble-shooter's Guide to Detect and Eliminate Common Faults and Errors

The following table has been developed to help you detect and eliminate common faults and errors. If you come across a fault/error that is not listed here, please contact your supplier. All of these faults/errors may only be investigated and rectified by specialists holding the qualifications as described on page 3.

Problem	Possible Cause	Remedy
Handset or drive system without function	- Handset or drive system defective - No supply voltage	- Contact your supplier/dealer - Connect to mains
Drives suddenly no longer respond, no movement takes place	- Thermoswitch on transformer or in the DEWERT controls has possibly been triggered - Temperature fuse in transformer has possibly been triggered - Instrument fuse has possibly been triggered - No supply voltage - Lead (mains and/or handset/slave drives) interrupted	- Leave the drive system in the rest position for approx. 20-30 minutes - Contact your supplier/dealer - Connect mains cable - Check the lead, if necessary restoring contact[1)]
Motor is running but the drive does not move	- GQR Bowden cable is not at the starting position	- adjust Bowden cable

1) see page 12 Maintenance and Repairs

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8. Cleaning

The **MEGAMAT 2** drive system has been designed to facilitate cleaning for the user, and this has been made even easier thanks to the large number of flat surfaces.
The **MEGAMAT 2** drive system should be cleaned with a damp cloth using a proprietary cleaning agent suitable for **polyamide 6**. Follow the instructions provided by the manufacturer of the respective cleaning agent used.

Before cleaning, always pull out the mains plug of the controls!

Never clean the drive system in a wash tunnel or with a **high-pressure cleaner nor spray liquids onto it**. You otherwise risk damaging the equipment!

When **cleaning** take care not to damage the drive system's **connection lead**!

In its basic version the drive system meets the requirements of the IP20 protection category. You have the option of upgrading the protection category to IP44 or IP66.

Do not use any solvents such as **benzene**, **alcohol** or similar substances.

9. Disposal

The **MEGAMAT 2** drive system contains electronic components, cables, metal, plastic etc.
The **MEGAMAT 2** drive system should be disposed of in accordance with the environmental regulations applicable in the respective country. Information on this subject can also be obtained from:

Federal Association for
Disposal Management BDE
Behrenstraße 29
10117 Berlin
Germany
Phone: +49 (0) 30-59 00 33 5-0
Www.bde-berlin.de

Notes on environmental directives and legislation

- The product complies with the European Directive 2002 / 95 / EC (RoHS as of 01.07.2006).
- The product is not subject to the European Directive 2002 / 96 / EC (WEEE) and its amendment EU Directive 2003 / 108 / EC.

The MEGAMAT 2 drive system may not be disposed of with the normal household waste!

MEGAMAT 2

EC Manufacturer's Declaration

According to Appendix II B of the EC Machinery Directive (98/37/EC)

The Manufacturer:

DEWERT

Antriebs- und Systemtechnik GmbH

Weststr. 1

32278 Kirchlengern

Germany

hereby declares that the drive system described below

MEGAMAT 2 (MCZ)

is not a ready-to-use machine in keeping with the EC Machinery Directive and, therefore, does not fully comply with the requirements of the Directive!

This machine may not be put into operation until conformity with the above Directive of the entire machine, into which it is to be installed, has been declared!

Partially applied harmonized standards:

Based on:

EN 292-1 Safety of Machines, Basic Terminology, Methods

EN 292-2 Safety of Machines, Guiding Technical Principles

Kirchlengern, 09th June 2008

Andreas Roither
Managing Director R&D and Engineering

EC Declarations

EC Declaration of Conformity

according to appendix IV of the EC Directive on Electromagnetic Compatibility 2004/108/EEC,
according to appendix III of the EC Low-Voltage Directive 2006/95/EEC

The Manufacturer:

DEWERT
Antriebs- und Systemtechnik GmbH
Weststr. 1
32278 Kirchlengern
Germany

hereby declares that the drive system described below

MEGAMAT 2 (MCZ) with DEWERT Controls

meets the following EC Directives:

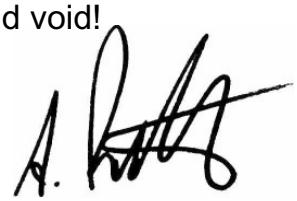
Directive on Electromagnetic Compatibility 2004/108/EEC

Low-Voltage Directive 2006/95/EEC

Applied Standards:

EN 60335-1
EN 55014-1
EN 55014-2
EN 61000-3-2
EN 61000-3-3
EN 50366 (measurement distance: 5cm)

Constructional changes which affect the technical data stated in the Installation Instructions as well as the designated use, in other words which alter the drive system in a significant way, make this Declaration of Conformity null and void!



Kirchlengern, 09th June 2008

Andreas Roither
Managing Director R&D and Engineering

MEGAMAT 2

Additional Information

For the MEGAMAT 2 (MCZ) drive system in the IP44 and IP66 versions with DEWERT CARE/HOSP control unit, the following standards were applied
Based on EN 60601-1:1990 +A1:1993 +A2:1995, Electromedical Equipment

EN60601-1, main section 2	Environmental Conditions
EN60601-1, main section 3	Protection against Electrical Shock Hazard
EN60601-1, section 21	Mechanical Strength
EN60601-1, main section 7	Protection against Excessive Temperatures
EN60601-1, main section 9	Non-designated Operation and Cases of Faults
EN60601-1, main section 10	Constructional Requirements
EN60601-1, section 56.8	But without power supply indicator
EN60601-1, section 36	Electromagnetic Compatibility
EN60601-1-2	Electromagnetic Compatibility

DEWERT

A Phoenix Mecano Company

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32278 Kirchlengern/Germany
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http://www.dewert.de
Info@dewert.de

06/2008
ID-Nr. 48148

Installation Instructions

Issue
12/2008

DEWERT
A Phoenix Mecano Company

Installation Instructions for the Manufacturer of the End Product

ACCUCONTROL 4.5

TÜV PRODUCT SERVICE
Produktion überwacht
Bauart geprüft

12/2008
ID No. 59245

ACCUCONTROL 4.5

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General Information

These instructions are intended for the manufacturer of the end product and are not designed for passing on to the operator of the end product. With regard to the specialist information contained herein, these instructions can serve as a basis for drawing up the instructions for the end products.

It is essential to note the information contained in these instructions! In doing so, you can prevent mistakes being made in installing or connecting the system which could result in…

- **injury and accidents as well as**
- **damage** to the drive system or the end product.

DEWERT **accepts no liability** for damage caused as a result of…

- non-observance of these instructions
- alterations to the product not approved by DEWERT or…
- the use of spare parts not manufactured or approved by DEWERT - these may not ensure adequate safety!

Due to the policy of ongoing product improvement, DEWERT reserves the right to carry out technical changes at any time without prior notification!

1. Designated Use

The **ACCUCONTROL 4.5** drive control unit **is designed** to be installed into mobile patient transport systems, e.g. lifting devices, day beds...

- as a mains-independent control system with its own voltage supply,
- for various applications in the hospital and care sector.

The **ACCUCONTROL 4.5** drive control unit is **not intended for use**...

- in an environment where **inflammable** or **explosive** gases or vapours (e.g. anaesthetics) are likely to occur,
- in environments where there is an open fire or other heat sources (e.g. heating, stove/oven, direct solar radiation...),
- in a damp environment, i.e. outdoors,
- in applications that are cleaned in wash tunnels,
- in applications used by small children or fragile persons,
- as a voltage source for children's toys (in particular **ACCU AC 4.5**),
- in the immediate vicinity of young children.

2. Prerequisites

The installation steps descriped in these instructions must be performed by a **suitable qualified or trained person**.

- This being the case, you should never carry out this work by **yourself** unless you are a **suitable trained person** or
- You should **entrust** this work to a **suitable qualified, skilled or trained person** only.

Conformity according to EC Directives

The **ACCUCONTROL 4.5** drive control unit is supplied ex factory as a machine **not ready for use** in accordance with the EC Machinery Directive. In other words, you may not put the drive control system into operation until you have met the **safety objectives** of the Machinery Directive and issued a corresponding **Declaration of Conformity**!

The drive control system meets the safety objectives of the EC Directives concering "**Low voltage"** and **"Electromagnetic Compatibility (EMC)".**

The **ACCUCONTROL 4.5** drive control unit is **not a medical product** if you install it into a medical device, manufacture in **conformity** with the EC Directive for "Medical Products" or other regulations it is the responsibility of the **manufacturer of the end product**.

Caution!
For your own safety!

Shutdown in an emergency is achieved by **actuating the emergency-off switch/ locking devise**! The **emergency-off switch/locking devise** must therefore be accessible at all times when the system is in operation to ensure it can be quickly actuated in an emergency.

Avoid subjecting the connection cables to mechanical loads. Regular visual checks of the connection cables should be carried out at short-term intervals and in particular each time it has been subjected to a mechanical load.

In the Operating Instructions to be drawn up by yourselves, it is essential that you draw the operator‘s attention to the points mentioned here.

3. Getting to Know the System

The **ACCUCONTROL 4.5** drive control unit is intended for the German market and complies with the European Law applicable in Germany in implementation of relevant EC Directives.

a) Product versions

To operate the drive controls, **further components**, **such as from 1 to 2 slave drives and a handset** are required.

Connectable components

	ACCUCONTROL 4.5 Bas[1)]	**ACCUCONTROL 4.5 Pro**[2)]
Handset	IPROXX®[3)]	IPROXX®[3)]
Drive for main function[4)]	MEGAMAT 2 MEGAMAT P	GIGAMAT MEGAMAT 2 MEGAMAT P
Drive for auxiliary function[5)]	MEGAMAT 2 MEGAMAT P	GIGAMAT MEGAMAT 2 MEGAMAT P

1) Version “Basic”

2) Version “Professional”

3) Special version for the ACCUCONTROL 4.5, for further information consult our customer support

4) Main adjustment drive

5) Slave adjustment drive

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b) Technical data

CONTROL AC 4.5

Input voltage	24V DC
Input current Version “Bas”	max. 7.0A DC
Input current Version “Pro”	max. 8.5A DC
Operating mode[1)]	Intermittent duty ID 2 min./18 min.
Protection classification	III
Primary current	max. 7.0A DC (Version “Bas”) max. 8.5A DC (Version “Pro”)
Overcurrent switch-off	adjustable up to 7.0A DC (Version “Bas”) adjustable up to 8.5A DC (Version “Pro”)
Load cycle with acoustic alarm threshold	max. 7.0A DC /60 s following max. 2A /60 s (Version “Bas”) max. 8.5A DC /60 s following max. 2A /60 s (Version “Pro”)
Acoustic alarm threshold	21V DC
Shutdown threshold deep-discharge protection	17V DC
Variations	Basic “Bas”; Professional “Pro”
Colours	grey
Application part	Type B (EN60601-1)

ACCU AC 4.5

Rated voltage	24V DC
Capacity	4,5Ah
Fuse	7,0A (Polyswitch)
Protection classification	III
Type of accumulator	Lead accumulator (Pb)
Self discharge	approx. 6 month
Charging time	approx. 8 h
Colours	grey

ACCUCONTROL 4.5

Protection category[2)]	IP54

1) **Operating mode** = **intermittent duty ID 2min./18 min.**, i.e. run for 2 min. max. under rated load, then a rest period of 18 min. must be observed, otherwise operational **failure could occur**!

2) Protection category IP54 is only achieved provided the “ACCU AC 4.5” accumulator pack is used together with the “CONTROL AC 4.5” control system as directed, see page 9.

ACCUCONTROL 4.5

Dimensions and weights

Length x width x height (CONTROL AC 4.5).... :	120.6 x 120 x 107.6 mm (without accumulator, without mounting bar)
Weight (CONTROL AC 4.5)..... :	approx. 0.7 kg (without accumulator, with mounting bar)
Length x width x height (ACCU AC 4.5)..... :	272.2 x 120 x 89.9 mm
Weight (ACCU AC 4.5)..... :	approx. 4.1 kg
Length x width x height (ACCUCONTROl 4.5).:	368 x 120 x 107.6 mm
Weight (ACCUCONTROL 4.5)..... :	approx. 4.8 kg

Ambient and storage conditions

Room temperature..... :	from +10° to +40° C
Transport and storage temperature..... :	from -20°C to +40°C
Recommended storage temperature..... :	+20°C or cooler
Rel. humidity..... :	from 30 % to 75 %
Barometric pressure..... :	from 700 hPa to 1060 hPa

Plug-in charger

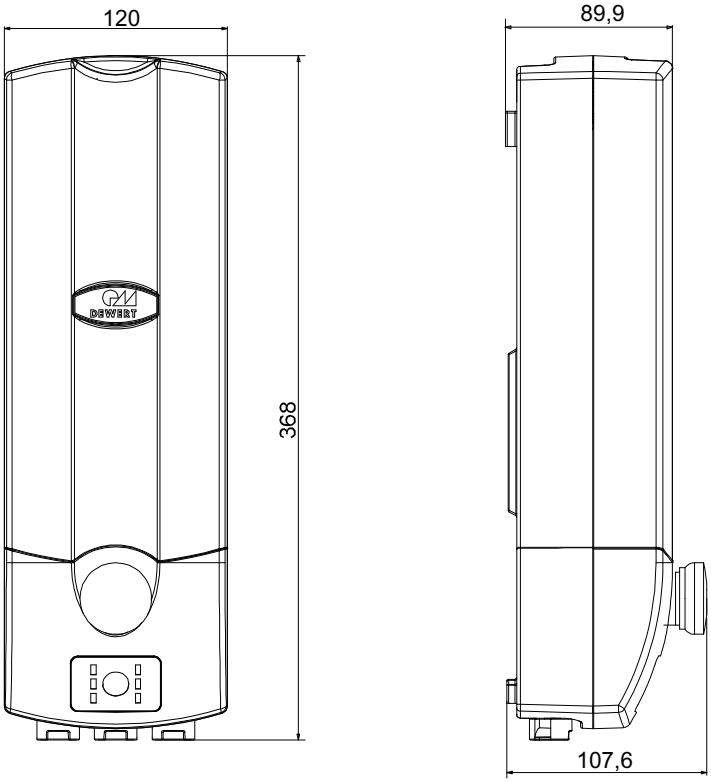
Charger..... :	DEWERT “PLUG-IN CHARGER PB 4.5”
Input voltage..... :	100 / 110 / 230 / 240V AC 50-60Hz
Charging voltage (rated voltage)..... :	24V DC
Charging current..... :	approx. 750 mA
Trickle charging current..... :	approx. 25 mA
Colours..... :	see sales brochure

alternate

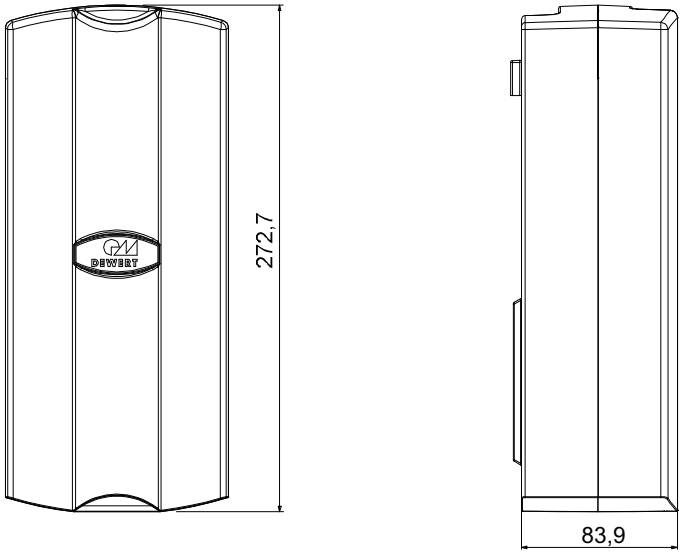
Charger..... :	PLUG-IN CHARGER PB
Input voltage..... :	100 - 240V AC 50-60Hz
Charging voltage (rated voltage)..... :	24V DC
Charging current..... :	approx. 500 mA
Trickle charging current..... :	approx. 25 mA
Colours..... :	black

c) Dimensions

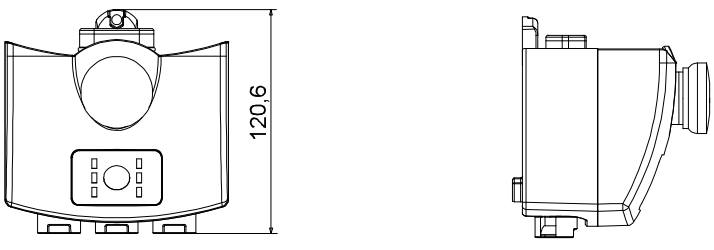
ACCUCONTROL 4.5



ACCU AC 4.5



CONTROL AC 4.5



ACCUCONTROL 4.5

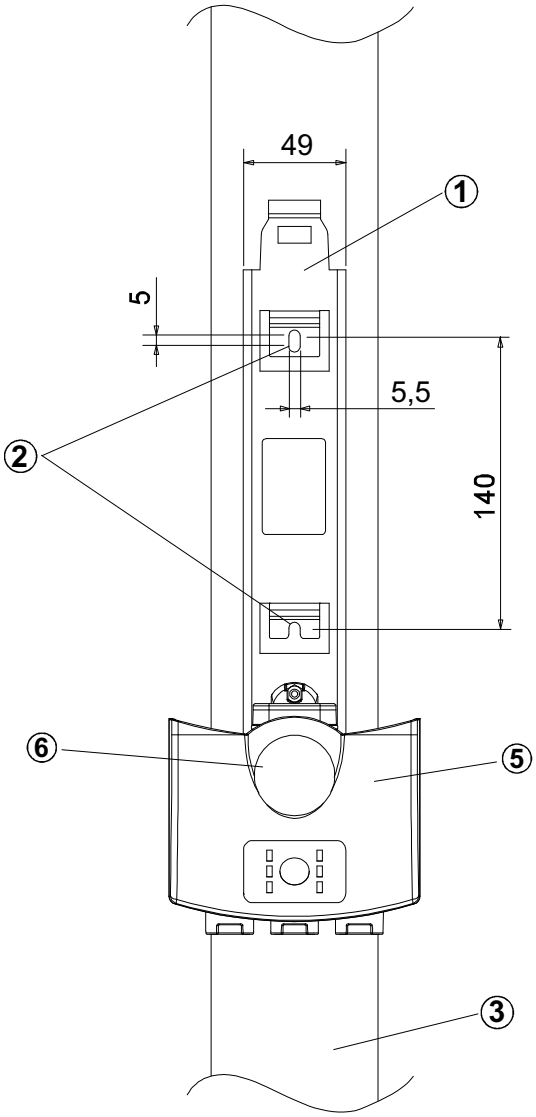
4. Fitting

a) Installation

Example: On a level surface, fix **mounting rail (1)** with **frame (3)** using 2 screws at **fixing points (2)**. Make sure that there is sufficient space to make installation possible.

Recommended installation position:

- Vertical on a level surface with the **ACCU AC 4.5** showing upwards
- Horizontal on a level surface with the mounting rail underneath the **ACCUCONTROL 4.5**



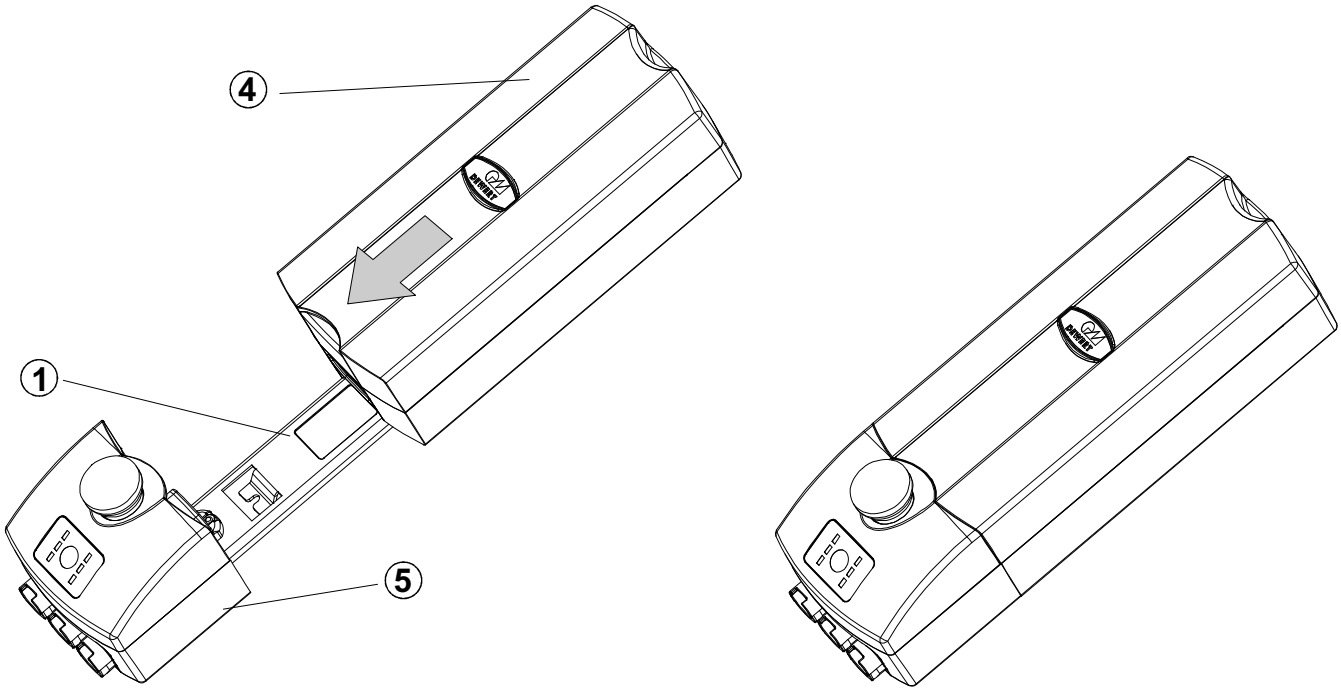
Attention!

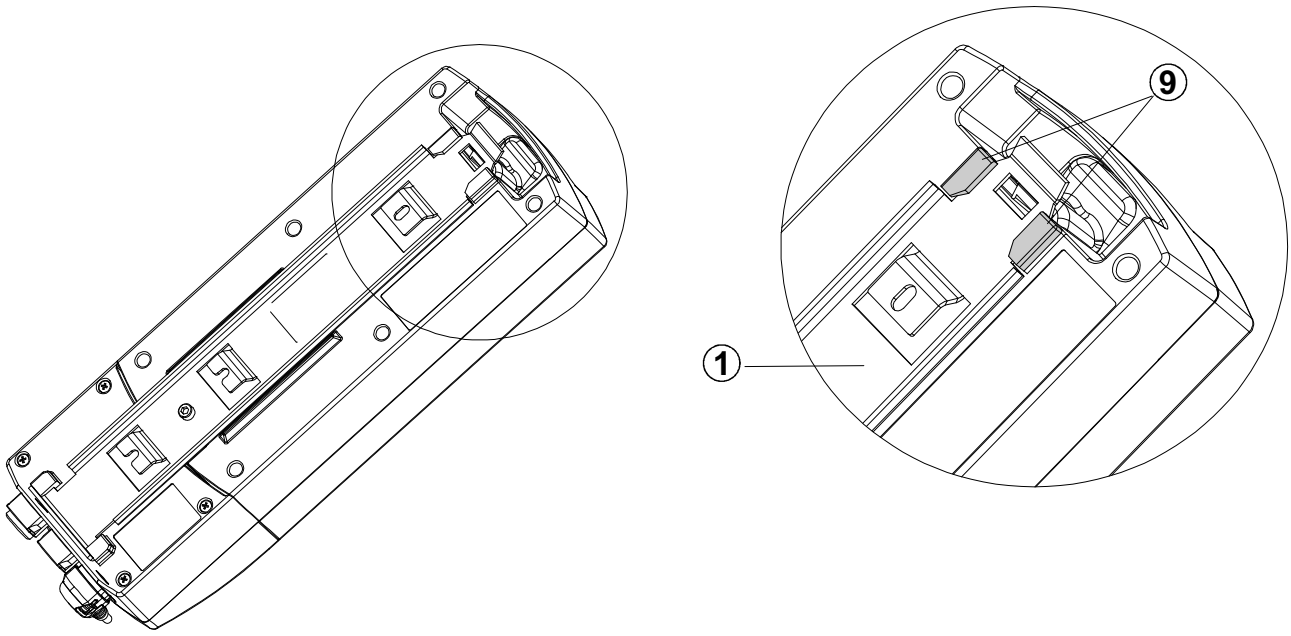
Before proceeding with any installation, dismantling or changing of the accumulator, it is important to observe the following:

- Before installing and after charging the **ACCU AC 4.5**, it must be **allowed to rest for at least 1 hour**.
- Only connect or isolate electrical components in the **voltage-free** state. To achieve this, actuate the **emergency-off switch/locking device (6)**.

b) Inserting the accumulator

Parallel to the **mounting rail (1)** push the **ACCU AC 4.5 (4)** onto the **CONTROL AC 4.5 (5)** as far as necessary to allow the **ACCU AC 4.5** to engage into the **mounting rail (1)** (**see below**). Ensure that **housing guides (9)** enclose **mounting rail (1)**. Check that the **ACCU AC 4.5 (4)** is properly seated on the mounting rail. You can then connect the slave drives and the handset to the **CONTROL AC 4.5**.





ACCUCONTROL 4.5 underside

c) Electrical connection

In the **Operating Instructions** to be drawn up by you point out to the user-operator that the connecting leads **should not be** subjected to any **mechanical loads**.

When routing the cables make sure that they

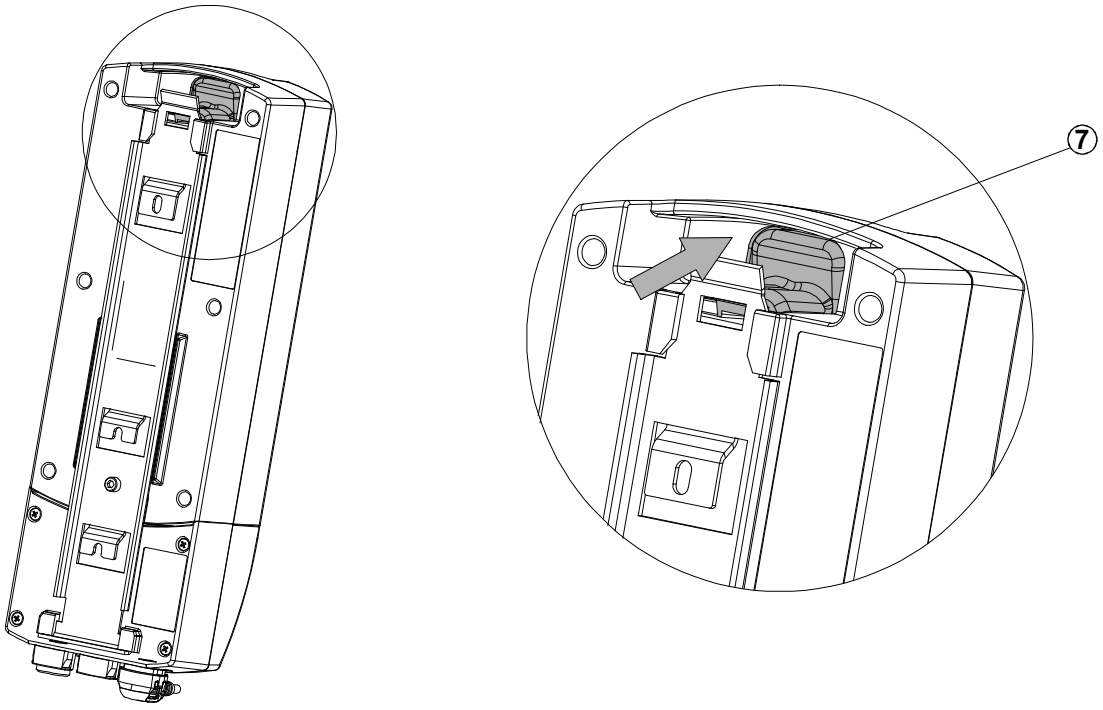
- cannot get entangled or trapped,
- are not subjected to mechanical loads (i.e. do not pull, apply pressure or bend),
- cannot get damaged in any other way.

Make sure that the cables are fastened to the application with adequate **strain relief** and adequate **kink protection** and that suitable constructional measures prevent the **connection cable** from **trailing on the floor** when the application is being **moved**.

First connect the **slave drives** and **controls** (see page 19). Make sure that any sockets not being used are sealed off with blind plugs, otherwise the protection category IP54 is **not** guaranteed.

d) Dismantling the ACCUCONTROL 4.5 and removing the ACCU AC 4.5

Operate the application to travel to the starting position and while actuating the **emergency-off switch/locking device** pull out all the plug connectors from the respective connecting sockets. Now remove **ACCU AC 4.5** from the **CONTROL AC 4.5**. To do this, grasp the **ACCU AC 4.5** by the handle at the same time as pressing the **release handle (7)**. **ACCU AC 4.5** can now be removed by withdrawing it upwards out of the **mounting rail**. Take the fixing screws out of the **mounting rail** on the **frame**, and the **CONTROL AC 4.5** can now be removed.



ACCUCONTROL 4.5 underside

5. Operation

For drawing up the Operating Instructions for the end product, you can use the specialist information described herein. Please bear in mind that these instructions are intended for you as a specialist and not for the possibly non-professional operator of the end product.

Attention!

- **ACCUCONTROL 4.5 is not intended to be used by small children or the unsupervised infirm.**
- **ACCUCONTROL 4.5 is not a toy for children to play with.**

Under unfavourable circumstances, violent mechanical jolts or impacts, for example as occurring in transit, can cause sustain electrical defects. Before initial operation or following extreme mechanical loads (e.g. if the unit has been dropped), we recommend that the following measures be taken to increase operational safety:

- check the housing for damage

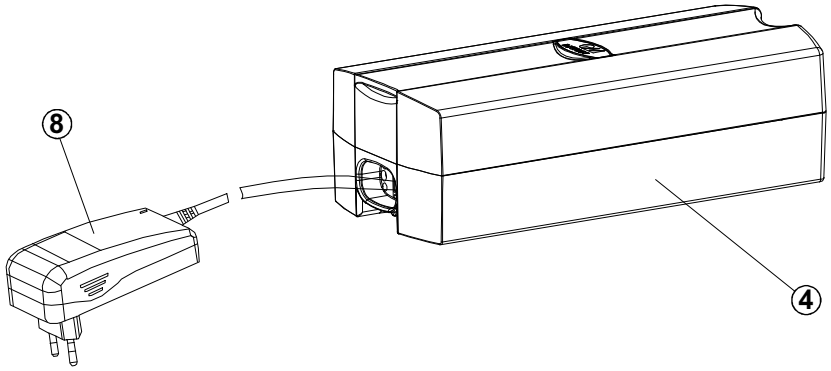
In as far as the housing shows signs of visible damage or excessive overheating of the unit occurs, immediately actuate the emergency-off switch, then isolate **ACCU AC 4.5** from the **CONTROL AC 4.5** and put the system out of operation.

To ensure electrical safety of the end product, it is important to draw attention to this requirement.

a) Connecting the PLUG-IN CHARGER PB 4.5
(alternate PLUG-IN CHARGER PB)

In order to charge the **ACCU AC 4.5**, it **must** be isolated from the **CONTROL AC 4.5**. By doing this, the ventilation ducts (see page 13) necessary for the charging process are automatically laid bare. Connect the **PLUG-IN CHARGER PB 4.5 (8)** (alternate PLUG-IN CHARGER PB) and **ACCU AC 4.5 (4)**. Finally plug the **PLUG-IN CHARGER PB 4.5** (alternate PLUG-IN CHARGER PB) into the house voltage supply. The charge state of **ACCU AC 4.5** is indicated by a coloured LED.

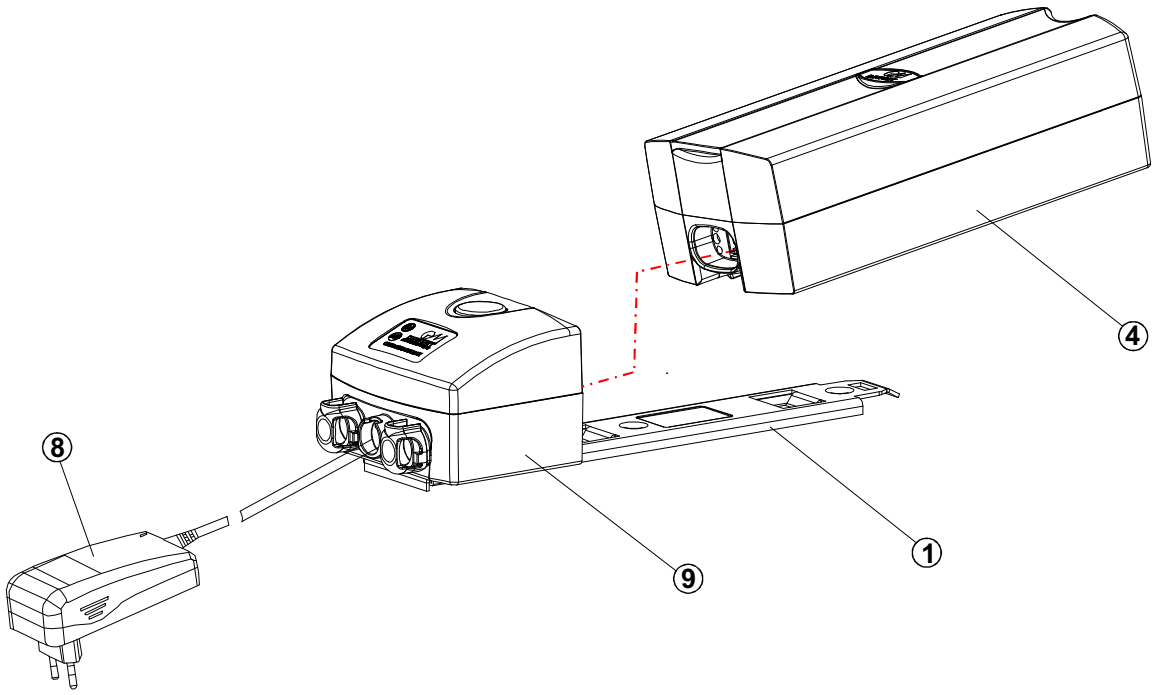
- The LED lights up constantly green, **ACCU AC 4.5** is charged.
- The LED flashes green, **ACCU AC 4.5** is in the process of being charged.



b) Connecting the charging station

The assembly of the **charging station (9)** can be done as described on page 8. In order to charge the **ACCU AC 4.5**, it **must** be isolated from the **CONTROL AC 4.5**. Parallel to the **mounting rail (1)** push the **ACCU AC 4.5 (4)** onto the **charging station (9)** as far as necessary to allow the **ACCU AC 4.5** to engage into the **mounting rail (1)**. Check that the **ACCU AC 4.5 (4)** is properly seated on the **mounting rail (1)**. Connect the **PLUG-IN CHARGER PB 4.5 (8)** (alternate PLUG-IN CHARGER PB) with the **charging station (9)** and **ACCU AC 4.5 (4)**. Finally plug the **PLUG-IN CHARGER PB 4.5** (alternate PLUG-IN CHARGER PB) into the house voltage supply. The charge state of **ACCU AC 4.5** is indicated by a coloured LED.

- The LED lights up constantly green, **ACCU AC 4.5** is charged.
- The LED flashes green, **ACCU AC 4.5** is in the process of being charged.

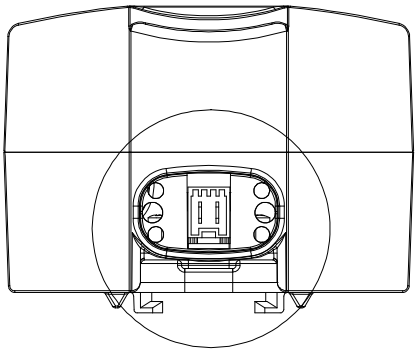


c) Using the accumulator

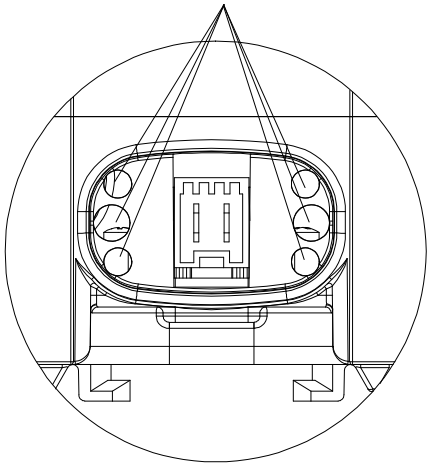
- Charge **ACCU AC 4.5 only** using the DEWERT **PLUG-IN CHARGER PB 4.5** (alternate PLUG-IN CHARGER PB)
- Before using the **ACCU AC 4.5** for the first time, charge it fully for at least 10 hours. The built-in rechargeable batteries will work at full capacity after approx. 5 to 10 charge/discharge cycles.
- When charging ensure that the ventilation ducts of the **ACCU AC 4.5** are **not** covered or concealed (see figure at bottom).
- In order to achieve the optimum service life for the **ACCU AC 4.5**, after charging it should be allowed to rest for approx. 1 hour before being used.
- Slide the **ACCU AC 4.5** into the **CONTROL AC 4.5** until it engages. The system is now ready for operation (see page 8).
- Depending on the version being used, the battery charge state is indicated on the **IPROXX®** handset or on the **CONTROL AC 4.5**.

Caution!

ACCU AC 4.5 must receive sufficient ventilation when charging.



Ventilation ducts



Caution!

Do not short-circuit Accu AC 4.5 nor touch the electrical contacts.

d) Deep-discharge protection

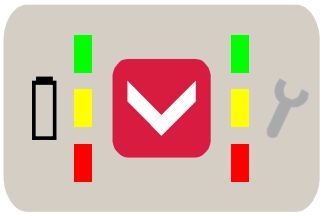
- The operator and control system will be deactivated fully if the battery voltage reaches the switch off threshold. Deep-discharge protection protects the battery from eventual damage which may occur if the acoustic discharge warning is ignored. With the emergency lowering button (see page 14) one-time lowering is possible.

e) Function CONTROL AC 4.5

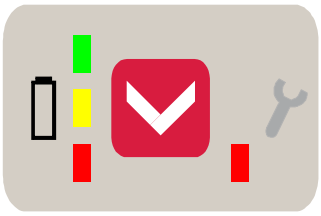
The functions of the **adjustment buttons are available**, provided the **emergency-off switch/locking device is not pressed.**

ACCUCONTROL 4.5

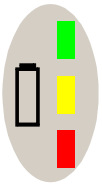
f) Operator‘s control on CONTROL AC 4.5



Example: Operator‘s control on CONTROL AC 4.5 Pro



Example: Operator‘s control on CONTROL AC 4.5 Bas



Charge level indicator

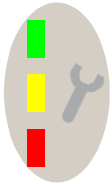
Green : **Accumulator full charged**

Green/yellow: **Accumulator approx. ¾ full**

Yellow : **Accumulator approx. ½ full**

Yellow/red : **Attention!** The **accumulator** should be charged, it is **almost empty**.

Red : **The accumulator is empty** and **must be charged immediately** otherwise a shortening of the service life must be expected. Red light and acoustic signal on pressing the button, it is still possible to perform a complete adjustment cycle.



Service indicator

LED indicator, when "red" shows no switch-off occurs.

Attention!

The service indicator is matched to the specific service life of DEWERT drives. When the red LED lights up, the drive system **must** be checked.

- Replacing old components with new ones
- Maintenance by DEWERT
- Maintenance following corresponding training by DEWERT

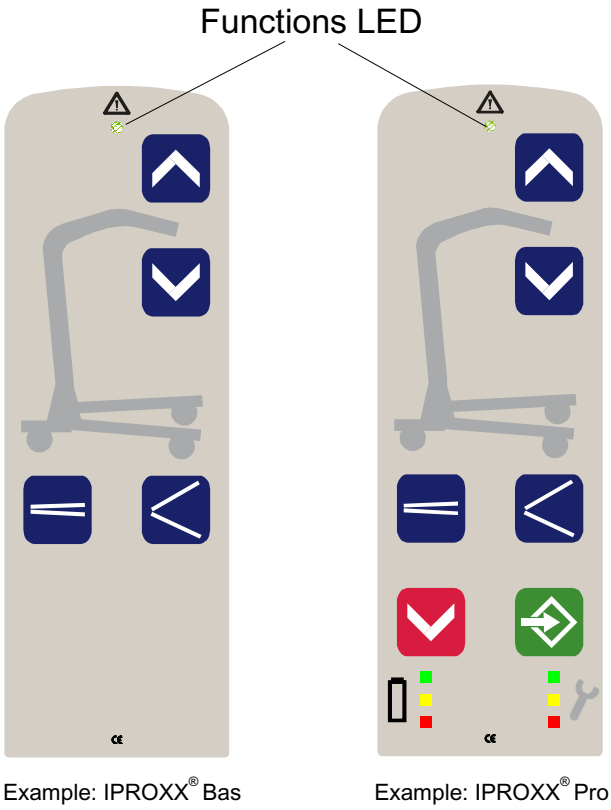
Please request details from your DEWERT customer support.

Emergency lowering button

“**Emergency lowering**” activates a separate switching circuit to lower the main adjustment drive and overrides all the **CONTROL AC 4.5** protective devices, with the exception of the emergency switch-off function.

g) Handset (Example)

For the **ACCUCONTROL 4.5** a version of the **IPROXX®** handset with special interface is used. Besides the adjustment buttons, this can be provided with a charge state indicator and service indicator as optional features. The control elements are assigned clear symbols which can be explained as follows:



Example: IPROXX® Bas

Example: IPROXX® Pro

up

down

Splay up

Splay down

Emergency lowering

Programming button for the overcurrent cut-off of the main adjustment drive

Charge level indicator (see page 13)

Service indicator (see page 13)

- The function LED **lights up** green when button pressed.
- The function LED **lights up constantly** or **does not light** meanwhile. This indicates a fault.
- Via the programming button the overcurrent switch-off can be set at an overload of up to 50 % (for programming see 16)
- The "**emergency lowering**" button still functions when the overcurrent switch-off or the deep charging protection is activated. Emergency lowering **only** functions for the main adjustment drive.
- The EMERGENCY-OFF button puts all functions out of operation.

h) Programming the overcurrent switch-off to put the system into operation

- Programming: Fasten the defined overload on the lifting device. Continuously pressing the button causes the main adjustment drive to travel automatically, thereby programming the overcurrent switch-off. The control system emits an acoustic signal to indicate that the process is completed.
- If the current value is exceeded, the overcurrent switch-off is triggered and adjustment is then **no longer** possible.
  Action: Reduce the load or operate to initiate upwards travel.

i) Maintenance and Repairs

At regular intervals carry out the inspections in accordance with the BGV A3 (Instruction of the Professional Trade Association). The inspections must be performed by an electrical specialist. The recommended inspection period is: **6 months**

In addition to the above, the following checks should be carried out at shorter intervals:

- **Regular visual checks for damage of all kinds**
  Check the housing for cracks and fractures and the mains connection lead, handset cable and drive cables for signs of pinching and shearing-off. Also check the strain relief with kink protection, in particular after each case of mechanical loading.
- **Regular checks of the service indicator**

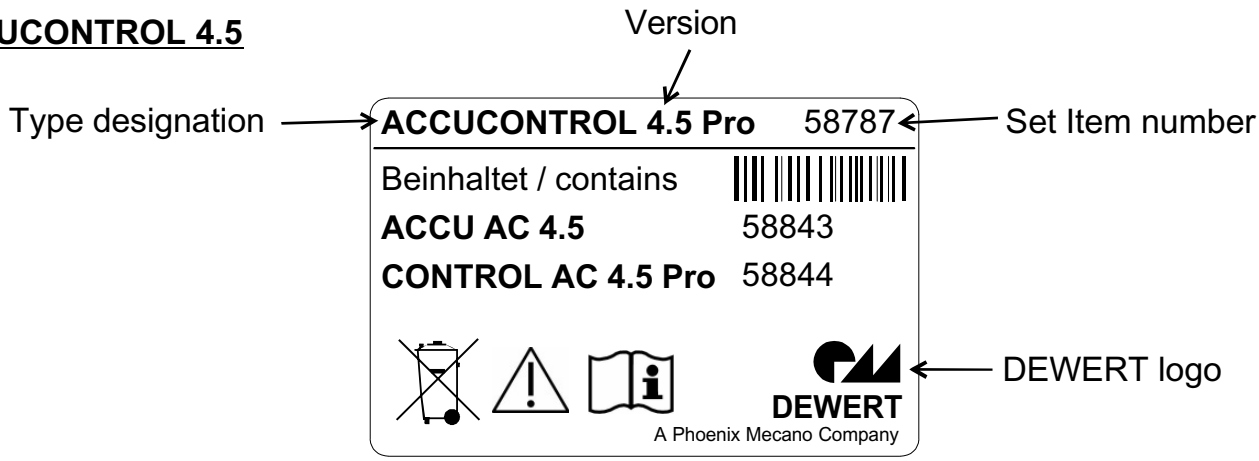
j) Care of ACCU AC 4.5

The lead gel batteries are maintenance-free. As with every battery system, the durability of the **ACCU AC 4.5** is limited and highly dependent on how the battery is cared for (see chapter 9, page 21). For optimum durability, please refer to the acoustic charge status display and charge the batteries after long periods of storage (a max. of 6 months should not be exceeded).

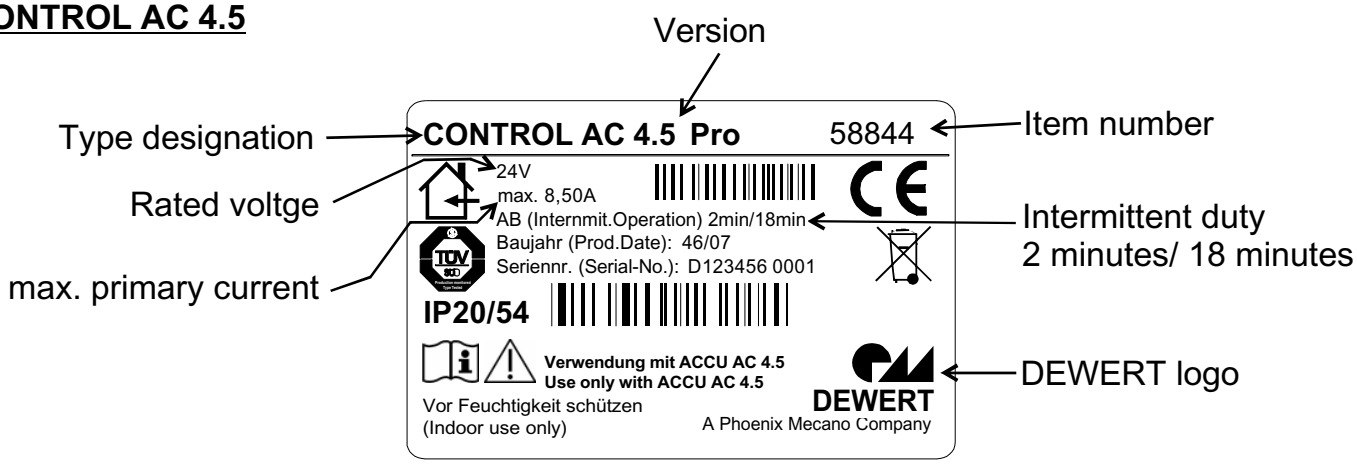
6. Type Label and Seal

Each system component carries an identification plate giving the exact model, item number and technical specifications (see following figure as an example).

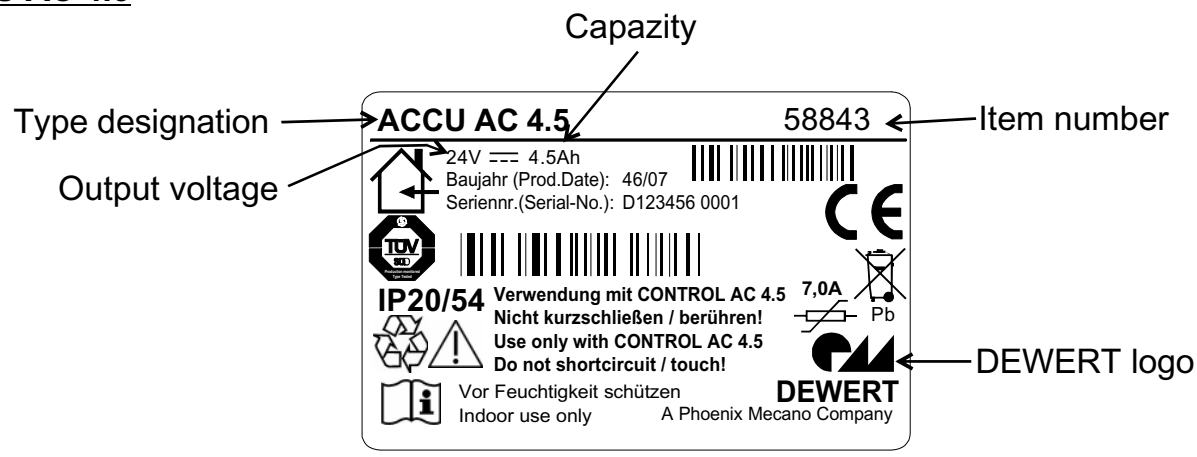
ACCUCONTROL 4.5



CONTROL AC 4.5



ACCU AC 4.5



ACCUCONTROL 4.5

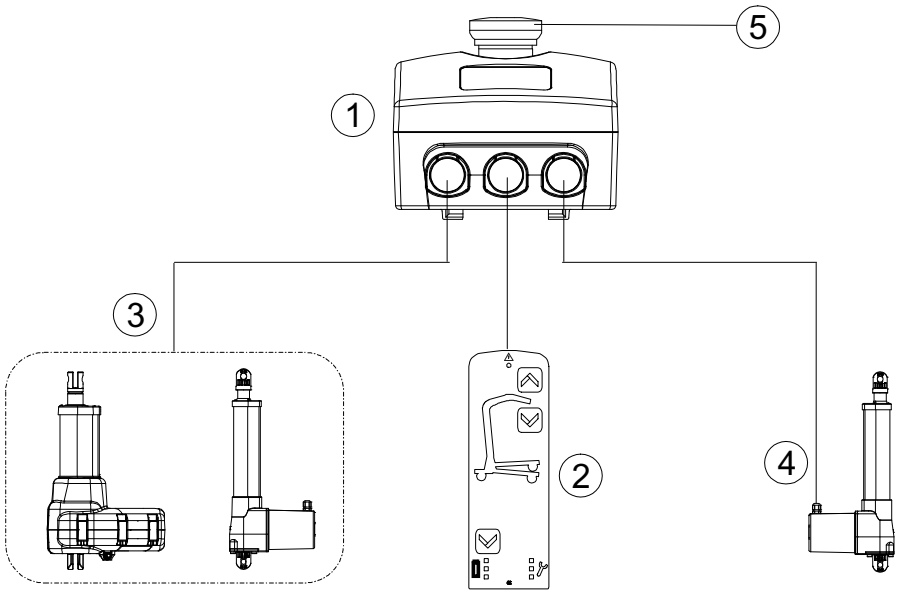
Graphical Symbols

CE	Conformity marks
IP20/54	Protection category
	Use in dry rooms only!
	Polyswitch
	Do not dispose in your household waste!
	Recycling
Pb	Pollutants contained: lead, among others
	Operation Instruction
	Caution! / Attention!

In order to guarantee the safety of DEWERT products, a seal is attached to all DEWERTproducts. Opening the product damages the seal, thereby indicating that the drive system has been altered or tampered with. The drive may only be opened by specialist personnel holding the qualifications as described on page 3.

7. Design of the ACCUCONTROL 4.5

(Example: ACCUCONTROL 4.5 with 2 slave drives and handset)



Only connect the components as shown!

Pos.	Part Designation	Description
1	DEWERT control unit	ACCUCONTROL 4.5
2	DEWERT handset	IPROXX® for ACCUCONTROL 4.5
3	DEWERT slave drive[1)] (Main adjustment drive)	e.g. GIGAMAT (**only** version “Pro”), MEGAMAT P....
4	DEWERT slave drive[2)] (Slave adjustment drive)	e.g. MEGAMAT P....
5	Locking device	emergency-off switch

[1)] Movement of the drive can be initiated via the emergency lowering button on the handset or the ACCUCONTROL 4.5.

[2)] Movement of the drive cannot be initiated via the emergency lowering button on the handset or the ACCUCONTROL 4.5.

8. Trouble-shooter's Guide to Detect and Eliminate Faults/Errors

The following table has been developed to help you detect and eliminate common faults and errors. If you come across a fault/error that is not listed here, please contact your supplier. All of these faults/errors may only be inspected and rectified by specialists holding the qualifications as described on page 3.

Problem	Possible Cause	Remedy
Handset or drive system without function. No adjustment can be made.	- Handset, drive system or accumulator defective - No accumulator voltage - emergency-off switch is locked	- Contact your supplier/ dealer - Charging the **ACCU AC 4.5** - Reset the emergency-off switch to "release"
Drives suddenly no longer respond, no movement takes place	- Polyswitch in **ACCU AC 4.5** has possibly been triggered - Instrument fuse is defective - Control unit is defective - Lead (slave drives/handset) interrupted - Overcurrent switch-off in **CONTROL AC 4.5** has possibly been triggered	- Leave the drivesystem in the rest position for approx. 20-30 minutes - Contact your supplier/ dealer - Check the lead, if necessary restoring contact - Reduce the load on the lifting device
Function LED in the handset does not light up when keys pressed or glows constantly	- Fault in the control system - End-of-travel position reached - Drive load exceeded - Battery backup system has reached total discharge	- Contact your supplier/ dealer - Operate drive to move from the end-of-travel position - Relieve the drives - Charging the **ACCU AC 4.5**
Acoustic warning sound can be heard. (Charge level indicator on the **CONTROL AC 4.5** or handset lights red)	- **ACCU AC 4.5** is charged to the warning threshold.	- Charging the **ACCU AC 4.5**

9. Maintenance, Care and Safety Notes

a) Maintenance Notes

- Clean plastic surfaces such as the housing with a slightly damp cloth (see chapter 9, cleaning).
- Charging the **ACCU AC 4.5** prior to use. Always use the DEWERT PLUG-IN CHARGER PB 4.5 (alternate PLUG-IN CHARGER PB). The built-in charge switch ensures that the battery remains fully charged at all times.
- Following longer periods of storage, the battery may need to be charged and discharged several times so that performance reaches a peak.
- Maximum storage time 6 months at the recommended storage temperature. After this time the battery should be recharged. In the case of higher storage temperatures the battery should be recharged even earlier. This is to avoid excessive discharging which could lead to the battery being damaged irreparably.

b) Care tips

- Make sure the **ACCU AC 4.5** is kept clean and dry at all times. Do not short-circuit the **ACCU AC 4.5**. Store the **ACCU AC 4.5** in such a way that the connections do not short-circuit each other, or short-circuit by coming into contact with metal objects.
- Do not subject the **ACCU AC 4.5** to mechanical vibrations.
- Do not use any battery charger other than the one recommended.
- Do not let the **ACCU AC 4.5** come into contact with organic solvents such as solvents, alcohol, oil and antirust agents, or agents abrasive to the surface such as chemical cleaning agents.
- Keep the original documents for future reference.
- The **ACCU AC 4.5** performs best at normal room temperatures between 20°C and 25°C.
- Do not submerge the **ACCU 4.5** in water or leave it in a damp place. Store it in a place that is dry and cool, the recommended relative air humidity should be around 50 %.
- Only use the **ACCU AC 4.5** for the purpose for which it was designed.

c) Safety tips

- Do not open or damage the **ACCU AC 4.5**.
- Do not expose the **ACCU AC 4.5** to heat or open flames. Avoided storing it in direct sunlight.
- The **ACCU AC 4.5** may only be charged when lying flat.
- If the battery leaks and you come into contact with the fluid, wash the affected area thoroughly in water and consult a doctor immediately.
- Only use the **ACCU AC 4.5** for the purpose for which it was designed.
- Store the **ACCU AC 4.5** well out of the reach of children.
- Do not throw the **ACCU AC 4.5** into fire, or open it, or solder or weld it.
- Dispose of the **ACCU AC 4.5** in the way prescribed by the bye-laws for old batteries and rechargeable batteries. In no case should you throw the **ACCU AC 4.5** in your household waste.

9. Cleaning

The cleaning of the **ACCUCONTROL 4.5** has been made even easier thanks to the large number of flat surfaces. The **ACCUCONTROL 4.5** should be cleaned with a proprietary cleaning agent suitable for **ABS** using a damp cloth. Always note the instructions provided by the manufacturer of the respective cleaning agent used.

Never clean the control unit in a wash tunnel or with a **high-pressure cleaner nor spray liquids onto it**, you otherwise risk damaging the equipment!

Do not use any solvents such as **benzene**, **alcohol** or similar substances.

10. Disposal

ACCUCONTROL 4.5 contains electronic components, cables, metal, plastic etc. **ACCUCONTROL 4.5** may not be disposed of with the normal household waste and it should be disposed of in accordance with the environmental regulations applicable in the respective country. Information on this subject can also be obtained from:

Federal Association for
Disposal Management BDE
Behrenstraße 29
10117 Berlin
Germany
Phone: +49 (0) 30-59 00 33 5-0
www.bde-berlin.de

Notes on environmental directives and legislation

- The product complies with the European Directive 2002 / 95 / EC (RoHS as of 01.07.2006).
- The product is not subject to the European Directive 2002 / 96 / EC (WEEE) and its amendment EU Directive 2003 / 108 / EC.

In as far as this product includes batteries, this complies with

- the Battery Ordinance of 27th March 1998 (BGBI. I S.658)

The **lead accumulator** is to be disposed of in line with the **AltBattVO**.

ACCUCONTROL 4.5 may not be disposed of with the normal household waste!

EC Manufacturer's Declaration

According to Appendix II B of the EC Machinery Directive (98/37/EC)

The Manufacturer:

DEWERT
Antriebs- und Systemtechnik GmbH
Weststr. 1
32278 Kirchlengern
Germany

hereby declares that the control unit described below

ACCUCONTROL 4.5 with DEWERT slave drives

is not a ready-to-use machine in keeping with the EC Machinery Directive and, therefore, does not fully comply with the requirements of the Directive!

This machine may not be put into operation until conformity with the above Directive of the entire machine, into which it is to be installed, has been declared!

Partially applied harmonized standards:

EN 292-1 Safety of Machines, Basic Terminology, Methods

EN 292-2 Safety of Machines, Guiding Technical Principles

Kirchlengern, 05th December 2008

Andreas Roither
Managing Director R&D and Engineering

ACCUCONTROL 4.5

EC Declarations

EC Declaration of Conformity

in accordance with Annex IV of the EC Directive on Electromagnetic Compatibilty 2004/108/EEC,
in accordance with Annex III of the EC Low-Voltage Directive 2006/95/EEC

The manufacturer:

DEWERT
Antriebs- und Systemtechnik GmbH
Weststr. 1
32278 Kirchlengern
Germany

hereby declares that the drive system described below

ACCUCONTROL 4.5 with DEWERT slave drive

satisfies the following EC Directives:

Directive on Electromagnetic Compatibility 2004/108/EEC

Low-Voltage Directive 2006/95/EEC

Applied Standards:

EN 60601-1
EN 60335-1
EN 55014-1
EN 55014-2
EN 61000-3-2
EN 61000-3-3
EN 50366 (measurement distance: 5cm)

Constructional changes which affect the technical data stated in the Installation Instructions as well as the designated use, in other words which alter the drive system to a significant extent, render this Declaration of Conformity null and void!

Kirchlengern, 05th December 2008 Andreas Roither
Managing Director R&D and Engineering

12/2008
ID No. 59245

Additional Information

ACCUCONTROL 4.5 Drive Control Unit (see system overview)

For the “Bas” and “Pro” versions the following standards were applied Based on EN 60601-1:1990 +A1:1993 +A2:1995, Electro medical Equipment

EN60601-1, main section 2	Environmental Conditions
EN60601-1, main section 3	Protection against Electrical Shock Hazard
EN60601-1, section 21	Mechanical Strength
EN60601-1, main section 7	Protection against excessive temperatures
EN60601-1, main section 9	Operation outside the requirements and faults cases
EN60601-1, main section 10	Constructional requirements
EN60601-1, section 56.8	Power supply indicator, optional

For the “Bas” and “Pro” versions the following standards were applied Based on EN60601-2-38:1996 +A1:2000, Power-driven hospital beds

EN60601-2-38, section 5.2	Classification of application part
EN60601-2-38, section 5.3	Protection category of the system: min.IPX4
EN60601-2-38, section 22.2.102	Locking device / emergency-off switch in system
EN60601-2-38, section 22.4.101	Operator‘s control with keypad
EN60601-2-38, section 36	Electromagnetic compatibility
EN60601-2-38, section 52.4.101	Unintentional movement (Locking device / emergency-off switch in system)
EN60601-2-38, section 52.5.9	Failure of subassemblies: prevention via locking device/ emergency-off switch
EN60601-2-38, section 52.5.101	Failure of electrical components
EN60601-2-38, section 52.5.102	Setting the backrest at an angle in the event of a power failure: Using a accumulator or mechanical release
EN60601-2-38, section 56.8	Lighting

In the case of the lifting device to transport disabled persons, the following standard has been applied: ISO 10535:2006

IEC 10535, section 4.3.1.24	Protection category of the system: min.IPX4
IEC 10535, section 4.3.1.17	Operator‘s control with keypad
IEC 10535, section 4.3.1.14	Easily operable by operator
IEC 10535, section 4.3.1.15	Operator‘s control locking device / emergency-off switch
IEC 10535, section 4.3.1.16	Operator‘s control with warning device
IEC 10535, section 4.3.1.23	Electromagnetic compatibility
IEC 10535, section 4.3.1.18	Overcurrent protection provided in system

Notes

Notes

DEWERT
A Phoenix Mecano Company

DEWERT
Antriebs- und Systemtechnik GmbH
Weststraße 1
32278 Kirchlengern
Tel: +49(0)5223/979-0
Fax: +49(0)5223/75182
http://www.dewert.de
Info@dewert.de

12/2008
ID No. 59245

Operating Instruction

DEWERT
A Phoenix Mecano Company

Operating Instructions for the Manufacturer of the End Product Handset IPROXX® SE/SE+

Issue
08/2005

IPROXX® SE/SE+

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Function of the Blocking Device IPROXX® SE..... page 3

Function Diagram IPROXX® SE..... page 4

Function of the Display..... page 4

Key Configuration IPROXX® SE+..... page 5

Function of the Blocking Device IPROXX® SE+..... page 5

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EC Declaration of Conformity..... Page 9

General Information

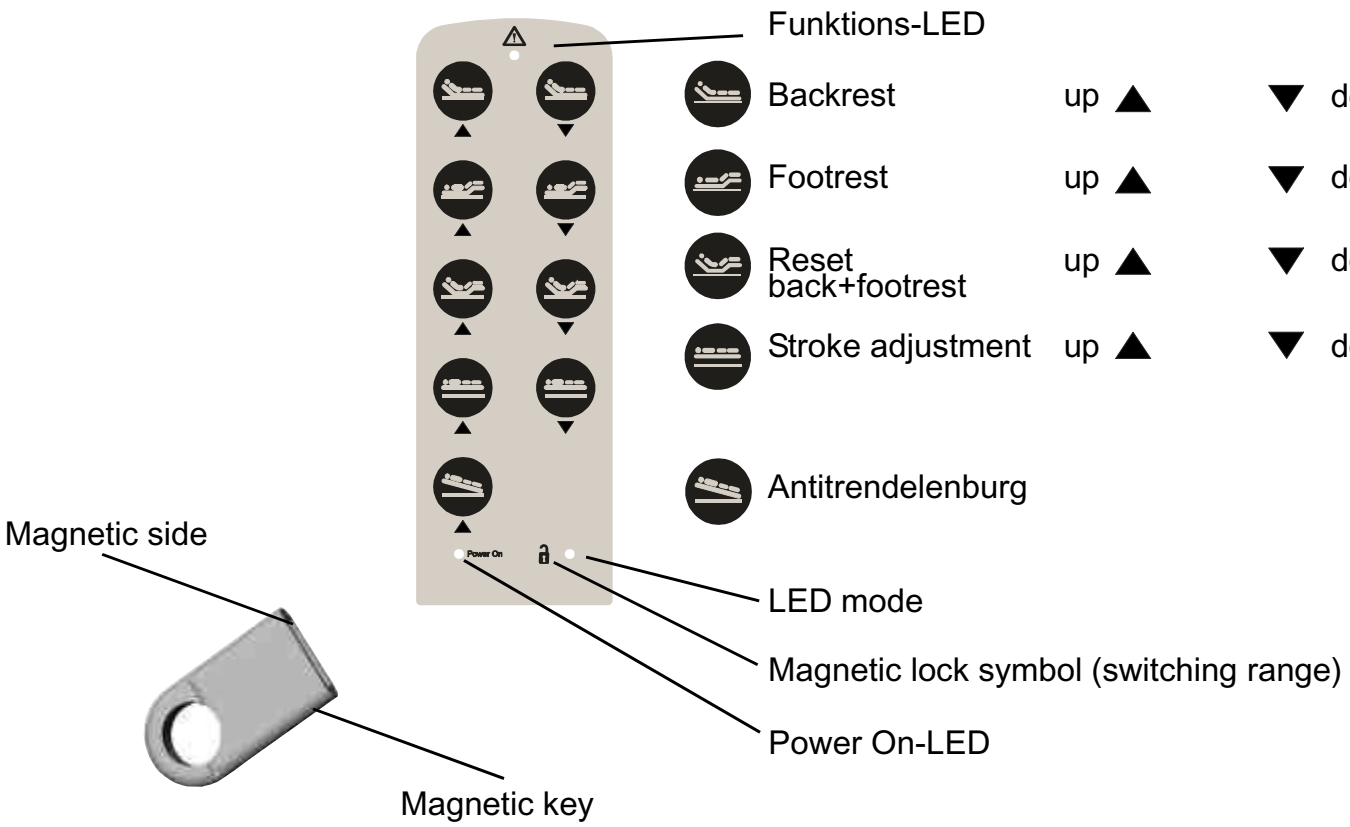
These Operating Instructions are intended for the manufacturer of the end product and not for the end user, the latter case requiring Operating Instructions, Directions for Use combined with the complete drive system.

Note: Keep the handset well away from **magnetic objects and strong magnetic fields** (>= 1 mT). The integrated blocking device can be activated or deactivated.

Handset IPROXX® SE

Key Configuration

Example: Handset **IPROXX® SE** with 9 adjustment keys.



Function of the blocking device

By **passing the magnetic side** of the **enclosed magnetic key** over the lock symbol, 2 modes can be **released or blocked**.

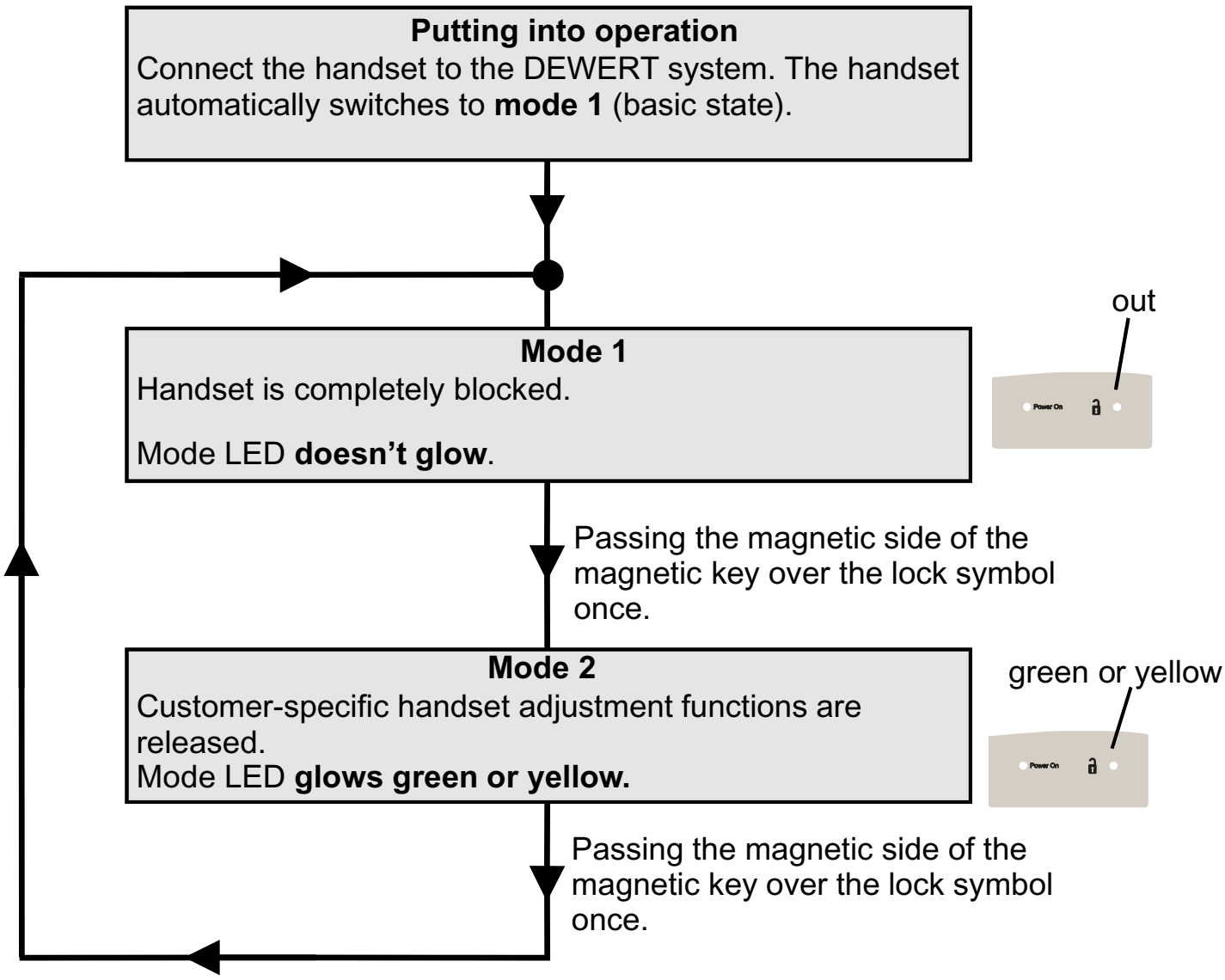
- To put the handset into operation, connect it to a **DEWERT control unit**[1] or a **DEWERT-drive**[1] with integral control PCB. The keyboard of the plugged in handset is completely blocked (mode 1).
  The mode LED next to the lock **doesn't glow.**

- **Passing** the magnetic side of the **magnetic key** once over the lock symbol releases the handset adjustment functions. They vary depending on the version or the customer's requirement (mode 2).
  The mode LED next to the lock **glows green or yellow.**
  You can only get to mode 1 by passing the magnetic side of the **magnetic key** once over the lock symbol, there is no time limit for disconnection.

1) Consult your customer contact beforehand in order to prevent any possible **damage** to the product.

IPROXX® SE/SE+

Function Diagram IPROXX® SE



Functions of the display

Function LED — LED **glows green** when a key is pressed, visual display of first-error security.

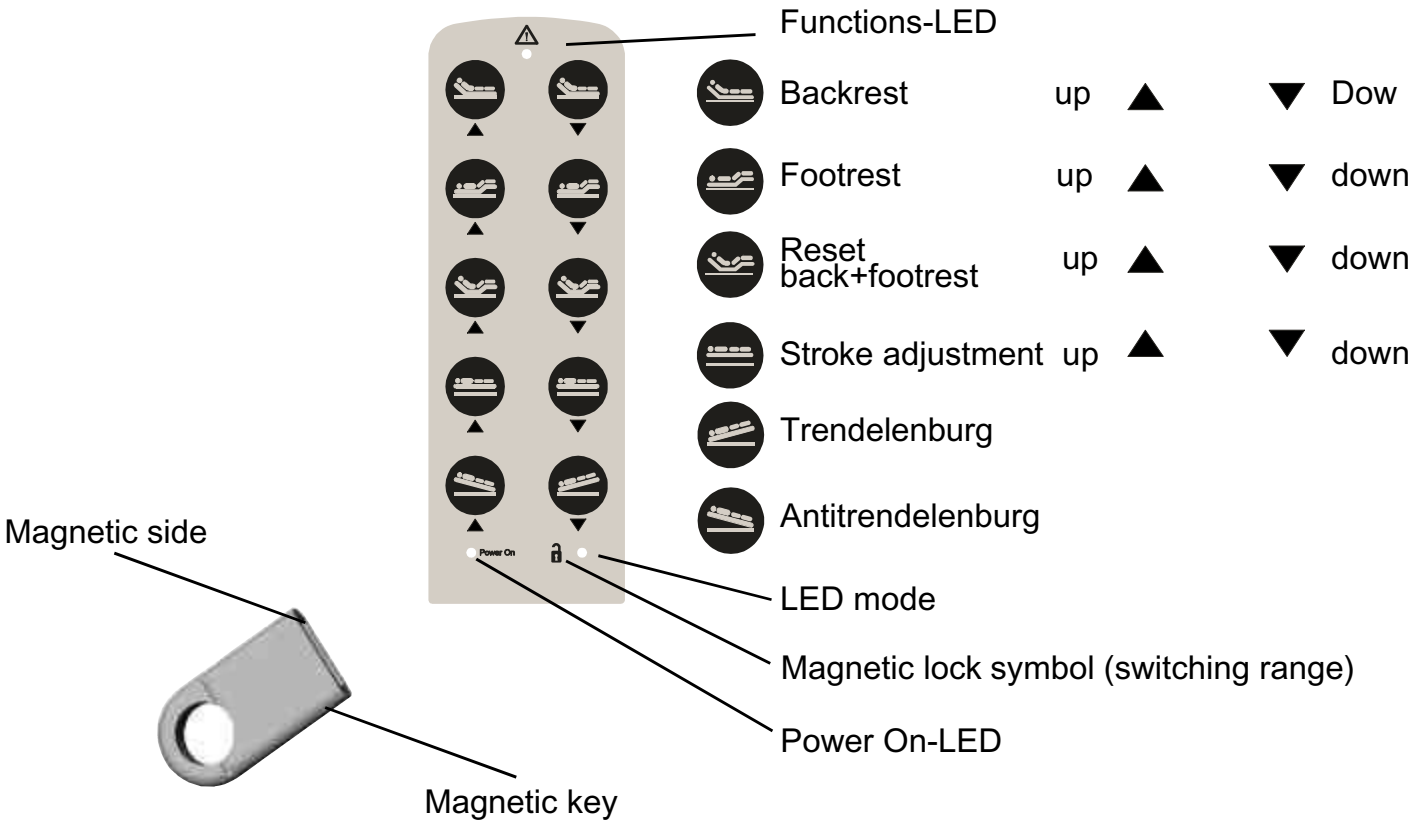
Power On LED — **with battery charging circuit**
LED **flashes yellow** when battery is charging.
LED **glows permanently** when battery is fully charged or not connected.

without battery charging circuit
LED **glows permanently** when connected to the mains.

Handset IPROXX® SE+

Key Configuration

Example: Handset **IPROXX® SE+** with 10 adjustment keys.



Function of the blocking device

By **passing the magnetic side** of the **enclosed magnetic key** over the lock symbol, 3 modes can be **released or blocked**.

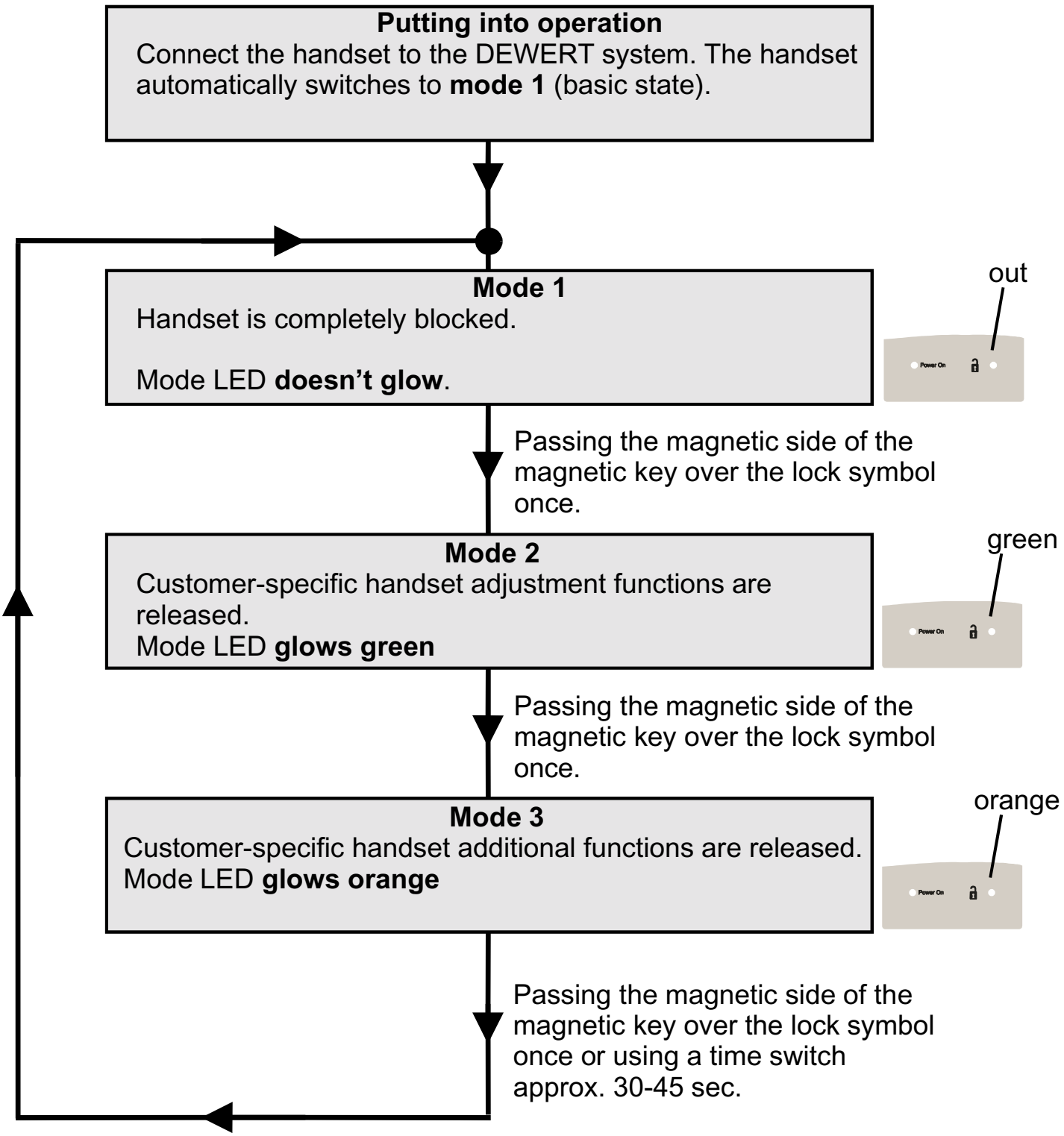
- To put the handset into operation, connect it to a **DEWERT control unit**[1] or a **DEWERT-drive**[1] with integral control PCB. The keyboard of the plugged in handset is completely blocked (mode 1).
  The mode LED next to the lock **doesn't glow.**

- **Passing** the magnetic side of the **magnetic key** once over the lock symbol releases the handset adjustment functions. They vary depending on the version or the customer's requirement (mode 2).
  The mode LED next to the lock **glows green.**

1) Consult your customer contact beforehand in order to prevent any possible damage to the product.

- By **passing the magnetic side** of the magnetic key over the lock symbol once again, additional functions on the handset (e.g. Trendelenburg, seated position) can be released. They vary depending on the version or the customer`s requirement (mode 3).
  The mode LED next to the lock **glows orange.**
  If no key is pressed after approx. 30-45 seconds of the handset having last been actuated, mode 1 is reset.

Funktionsdiagramm IPROXX® SE+



Functions of the display

Function LED	LED **glows green** when a key is pressed, visual display of first-error security.
Power on LED	**with battery charging circuit** LED **flashes yellow** when battery is charging. LED **glows permanently** when battery is fully charged or not connected. **without battery charging circuit** LED **glows permanently** when connected to the mains.

Handset faults (control unit with first-error security)

There is a **fault/first error** in the integral blocking device,

- if the LED mode does not glow in the **blocking** device
- if the LED mode does not glow in the **released** state.

Then check the system.

Trouble-shooter's Guide to Detect and Eliminate Faults

The following table has been developed to help you detect and eliminate common faults. If you come across a fault that is not listed here, please contact your supplier.

Problem	Possible Cause	Remedy
Mode LED glows in the blocked state Mode LED doesn't glow in the released state	- Fault in the handset - Fault in the control unit	- contact your supplier/ dealer
No adjustment can be made	- Handset is blocked (after a Power failure the handset automatically switches to the blocked state)	- Release the handset Using the magnet
The function-LED doesn't glow when a key is pressed (control unit with first-error security only)	- Control unit or handset defective	- contact your supplier/ dealer

EC Declarations

EC Declaration of Conformity

according to appendix I of the EC Directive on Electromagnetic Compatibility 89/336/EWG,

The Manufacturer:

DEWERT
Antriebs- und Systemtechnik GmbH
Weststr. 1
32278 Kirchlengern
Germany

hereby declares that the drive system described below

IPROXX® **with DEWERT-drive unit**

meets the following EC Directives:

Directive on Electromagnetic Compatibility 89/336/EWG

Applied Standards:

EN 55014-1
EN 55014-2
EN 61000-3-2
EN 61000-3-3
EN 60601-1-2
EN 1970, main section 5.12

Constructional changes which affect the technical data stated in the Installation Instructions as well as the designated use, in other words which change the drive system in a considerable way, make this Declaration of Conformity null and void!

Kirchlengern, 25th August 2005

Herbert Stumpe
Management

Notes

Notes

DEWERT
A Phoenix Mecano Company

DEWERT
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DEWERT
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INFORMACIÓN / CERTIFICACIÓN

PAH: Polycyclic Aromatic Hydrocarbon (Hidrocarburos Aromáticos Policíclicos)

Son 16 sustancias provenientes del carbón y el petróleo las cuales están clasificadas como contaminantes y peligrosas para la salud.
Confirmamos que todos nuestros productos cumplen con la Categoría 3 de la Recomendación para Hidrocarburos Aromáticos Policíclicos

(PAH Recommendation Category 3).

REACH: Registration Evaluation Autorization Restriction of Chemicals (Registro, Evaluación, Autorización y Restricción de Químicos)

REACH requiere registrar todas las sustancias químicas contenidas en productos y suministradas dentro de la Unión Europea y evaluar su peligro potencial para el ser humano y el medio ambiente.
Insistimos en confirmaciones escritas de nuestros proveedores que todos los componentes químicos alcanzan los requerimientos de registro.

RoHS: Restriction of the use of certain hazardous substances (Restricción del uso de ciertas sustancias peligrosas)

La directiva RoHS prohibe el uso de plomo, mercurio, cadmio, cromo hexavalente, bifenilos polibromados (PBB) y éter difenilo policlorados (PBDE) en productos eléctricos ó electrónicos vendidos en los mercados europeos.
Todas nuestras ruedas y soportes para muebles, institucionales, hospitalarias e inoxidables cumplen con la directiva 2002/95/EG.

Prohibición de Plomo en Dinamarca: La hoja de datos nº 33 no se aplica a nuestros productos.

TÜV: TENTE provee a TÜV ruedas y soportes hospitalarios certificados técnicamente. Nuestra serie Integral 2040 está aprobada de acuerdo a las normas DIN EN 12531 e ICE 60601

TÜV SÜD
Production monitored
Type tested

Emitido: 07/2009

CERTIFICATE

TÜV NORD

Management system as per
DIN EN ISO 9001 : 2008

In accordance with TÜV NORD CERT procedures, it is hereby certified that

Tente Rollen GmbH
Herrlinghausen 75
42929 Wermelskirchen
Germany

TENTE The World in Motion.

applies a management system in line with the above standard for the following scope

Development, production and marketing of casters, wheels and related actuation systems

Certificate Registration No. 44 100 090834
Audit Report No. 3504 7532

Valid until 2012-09-22

Certification Body
at TÜV NORD CERT GmbH

Essen, 2009-09-23

This certification was conducted in accordance with the TÜV NORD CERT auditing and certification procedures and is subject to regular surveillance audits.

TÜV NORD CERT GmbH Langemarckstrasse 20 45141 Essen www.tuev-nord-cert.com

IAF

TGA-ZM-07-06-00

The World in Motion. TENTE

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International Awards and Recognitions received for TENTE-Products

product design award

universal design award 09

reddot design award

Interzum Award
High product quality

German Designer Club
Gute Gestaltung

German Design Council

Design award of the
Federal Republik of Germany

Standards

New Standards are continuously drawn up for castors and wheels and the equipment utilizing these products:

- DIN EN 12 526
  Castors and Wheels – Vocabulary
- DIN EN 12 527
  Castors and Wheels – Test methods and apparatus
- DIN EN 12 528
  Castors for furniture
- DIN EN 12 529
  Castors for furniture, Castors for swivel chairs
- DIN EN 12 530
  Institutional castors
- DIN EN 12 531
  Hospital bed castors
- DIN EN 12 532
  Industrial castors
- DIN EN 12 533
  Heavy duty castors
- DIN EN 840 -1 to 840 - 6
  Mobile waste containers
- DIN EN 1929
  Basket trolleys
- DIN 18 867 Part 8
  Mobile equipment
- DIN EN 60 601-2-52
  Medical electrical equipment
  Part 2-52: Particular requirements for basic safety and essential performance of medical beds

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